HITACHI

PA

No. 0115

SERVICE MANUAL

50CX29B/50EX39B
60CX29B/60EX39B

NTSC

AP90 Chassis
AP91 Chassis

R/C: CLU-435U
R/C: CLU-435UI

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CAUTION: Before servicing this chassis, it is important that the service technician read the "Safety Precaution" and "Product Safety Notices" in this service manual.

SAFETY NOTICE
USE ISOLATION TRANSFORMER WHEN SERVICING

Components having special safety characteristics are identified by a ⚠ on the schematics and on the parts list in this Service Data and its supplements and bulletins. Before servicing the chassis, it is important that the service technician read and follow the "Safety Precautions" and "Product Safety Notices" in this Service Manual.

*For continued x-radiation protection, replace picture tube with original type of Hitachi approved equivalent type.

SPECIFICATIONS AND PARTS ARE SUBJECT TO CHANGE FOR IMPROVEMENT

PROJECTION COLOR TELEVISION

MAY 1999 HHEA-MANUFACTURING DIVISION

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For continued X-Radiation protection, replace picture tube with original type or Hitachi approved equivalent type.

This Service Manual is intended for qualified service technicians; it is not meant for the casual do-it-yourselfer. Qualified technicians have the necessary test equipment and tools, and have been trained to properly and safely repair complex products such as those covered by this manual.
Improperly performed repairs can adversely affect the safety and reliability of the product and may void warranty. If you are not qualified to perform the repair of this product properly and safely, you should not risk trying to do so and refer the repair to a qualified service technician.

WARNING

Lead in solder used in this product is listed by the California Health and Welfare agency as a known reproductive toxicant which may cause birth defects or other reproductive harm (California Health and Safety Code, Section 25249.5).

When servicing or handling circuit boards and other components which contain lead in solder, avoid unprotected skin contact with solder. Also, when soldering do not inhale any smoke or fumes produced.

This television receiver provides display of television closed captioning in accordance with section 15.119 of the FCC rules.

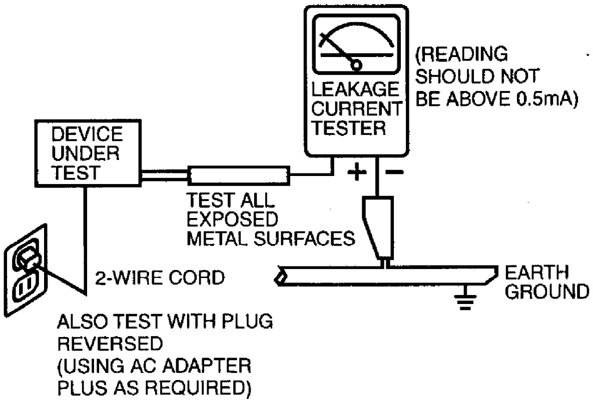
SAFETY PRECAUTIONS

1. Before returning an instrument to the customer, always make a safety check of the entire instrument, including but not limited to the following items.
   a. Be sure that no built-in protective devices are defective and/or have been deleted during servicing. (1) Protective shields are provided on this chassis to protect both the technician and the customer. Correctly replace all missing protective shields, including any removed for servicing convenience. (2) When reinstalling the chassis and/or other assembly in the cabinet, be sure to put back in place all protective devices, including but not limited to, nonmetallic control knobs, insulating fishpaper, adjustment and compartment covers/shields, and isolation resistor/capacitor networks. **Do not operate this instrument or permit it to be operated without all protective devices correctly installed and functioning. Servicers who defeat safety features or fail to perform safety checks may be liable for any resulting damage.**

   b. Be sure that there are no cabinet openings through which an adult or child might be able to insert their fingers and contact a hazardous voltage. Such openings include, but are not limited to (1) spacing between the picture tube and cabinet mask, (2) excessively wide cabinet ventilation slots, and (3) an improperly fitted and/or incorrectly secured cabinet back cover.

   c. **Antenna Cold Check** – With the instrument AC plug removed from any AC source, connect an electrical jumper across the two AC plug prongs. Place the instrument AC switch in the on position. Connect one lead of an ohmmeter to the AC plug prongs tied together and touch the other ohmmeter lead in turn to each tuner antenna input, exposed terminal screw and, if applicable, to the coaxial connector. If the measured resistance is less than 1.0 megohms or greater than 5.2 megohms, an abnormality exists that must be corrected before the instrument is returned to the customer. Repeat this test with the instrument AC switch in the off position.

   d. **Leakage Current Hot Check** – With the instrument completely reassembled, plug the AC line cord directly into a 120V AC outlet. (Do not use an isolation transformer during this test.) Use a leakage current tester or a metering system that complies with American National Standards Institute (ANSI) C101.0 Leakage Current for Appliances and Underwriters Laboratories (UL) 1410, (50.7). With the instrument AC switch first in the on position and then in the off position, measure from a known earth ground (metal waterpipe, conduit, etc.) to all exposed metal parts of the instrument (antennas, handle bracket, metal cabinet, screw heads, metallic overlays, control shafts, etc.), especially any exposed metal parts that offer an electrical return path to the chassis. Any current measured must not exceed 0.5 milliamps. Reverse the instrument power cord plug in the outlet and repeat test.


LEAKAGE CURRENT TESTER
(READING SHOULD NOT BE ABOVE 0.5mA)
DEVICE UNDER TEST
+
−
TEST ALL EXPOSED METAL SURFACES
2-WIRE CORD
EARTH GROUND
ALSO TEST WITH PLUG REVERSED (USING AC ADAPTER PLUS AS REQUIRED)

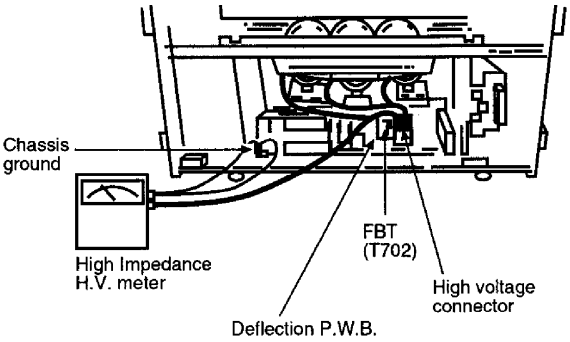
AC Leakage Test

ANY MEASUREMENTS NOT WITHIN THE LIMITS SPECIFIED HEREIN INDICATE A POTENTIAL SHOCK HAZARD THAT MUST BE ELIMINATED BEFORE RETURNING THE INSTRUMENT TO THE CUSTOMER OR BEFORE CONNECTING THE ANTENNA OR ACCESSORIES.

   e. **High Voltage** – This receiver is provided with a hold down circuit for clearly indicating that voltage has increased in excess of a predetermined value. Comply will all notes described in this Service Manual regarding this hold down circuit when servicing, so that this hold down circuit may correctly be operated.

   f. **Service Warning** – With maximum contrast, operating high voltage in this receiver is lower than **31.5 kV.** In case any component having influence on high voltage is replaced, confirm that the high voltage with maximum contrast is lower than **31.5 kV.**
   To measure H.V. use a high impedance H.V. meter. Connect (-) to chassis earth and (+) to the CRT anode button. (See the following connection diagram.)

   Note: Turn power switch off without fail before the connection to the anode button is made.



g. **X-radiation – TUBE:** The primary source of X-radiation in this receiver is the picture tube. The tube utilized for the above mentioned function in this chassis is specially constructed to limit X-radiation emissions.

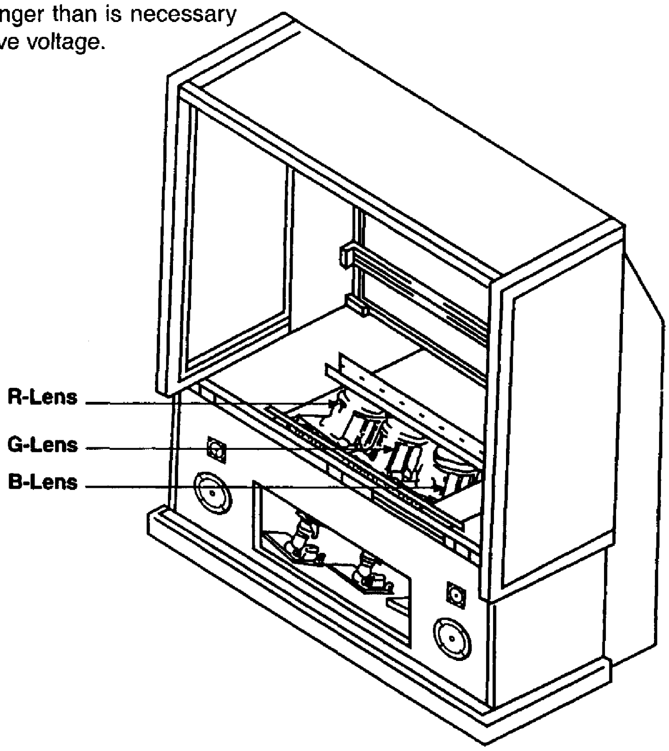
For continued X-radiation protection, the replacement tube must be the same type as the original, Hitachi approved type.

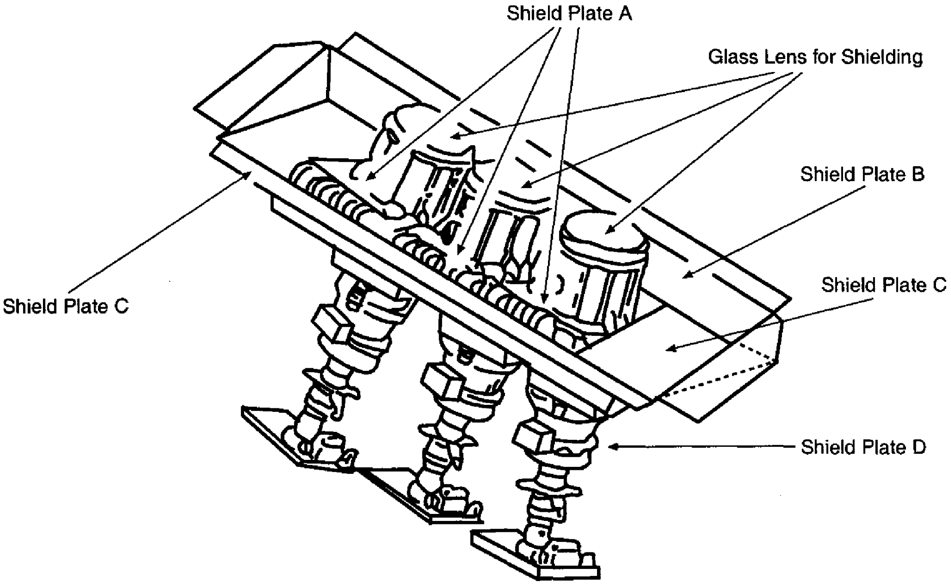
When troubleshooting and making test measurements in a receiver with a problem of excessive high voltage, avoid being unnecessarily close to the picture tube and the high voltage component.

Do not operate the chassis longer than is necessary to locate the cause of excessive voltage.

h. **X-radiation Shield –**

1. This receiver is provided with X-ray shield plates for protection against X-radiation. Do not remove X-ray shield plates A, B, C, or D shown in Fig. 1 unnecessarily, when troubleshooting and/or making test measurements.
2. To prevent X-radiation, after replacement of picture tube and lens, confirm these components to be fixed correctly to bracket and cabinet, and not to be taken off easily.





Detailing X-radiation shield

Fig. 1. Detailing X-radiation Shield

2. Read and comply with all caution and safety-related notes on or inside the receiver cabinet, on the receiver chassis, or on the picture tube.

3. **Design Alteration Warning** – Do not alter or add to the mechanical or electrical design of this TV receiver. Design alterations and additions including but not limited to circuit modifications and the addition of items such as auxiliary audio and/or video output connectors, might alter the safety characteristics of this receiver and create a hazard to the user. Any design alterations or additions may void the manufacturer's warranty and may make you, the servicer, responsible for personal injury or property damage resulting therefrom.

4. **Picture Tube Implosion Protection Warning** – The picture tube in this receiver employs integral implosion protection. For continued implosion protection, replace the picture tube only with one of the same type number. Do not remove, install, or otherwise handle the picture tube in any manner without first putting on shatterproof goggles equipped with side shields. People not so equipped must be kept safely away while picture tubes are handled. Keep the picture tube away from your body. Do not handle the picture tube by its neck.

5. **Hot Chassis Warning** – **a.** Some TV receiver chassis are electrically connected directly to one conductor of the AC power cord and may be safely serviced without an isolation transformer only if the AC power plug is inserted so that the chassis is connected to the ground side of the AC power source. Confirm that the AC power plug is inserted correctly with an AC voltmeter by measuring between the chassis and a known earth ground. If a voltage reading in excess of 1.0V is obtained, remove and reinsert the AC power plug in the opposite polarity and again measure the voltage potential between the chassis and a known earth ground. **b.** Some TV receiver chassis normally have 85V AC (RMS) between chassis and earth ground regardless of the AC plug polarity. These chassis can be safely serviced only with an isolation transformer inserted in the power line between the receiver and the AC power source, for both personnel and test equipment protection. c. Some TV receiver chassis have a secondary ground system in addition to the main chassis ground. This secondary ground system is not isolated from the AC power line. The two ground systems are electrically separated by insulating material that must not be defeated or altered.

6. Observe original lead dress. Take extra care to assure correct lead dress in the following areas: **a.** near sharp edges, **b.** near thermally hot parts – be sure that leads and components do not touch thermally hot parts, **c.** the AC supply, **d.** high voltage and **e.** antenna wiring. Always inspect in all areas for pinched, out-of-plate, or frayed wiring. Do not change spacing between components and the printed circuit board. Check AC power cord for damage.

7. Components, parts, and/or wiring that appear to have overheated or are otherwise damaged should be replaced with components, parts, or wiring that meet original specifications. Additionally, determine the cause of overheating and/or damage and, if necessary, take corrective action to remove any potential safety hazard.

8. **PRODUCT SAFETY NOTICE** – Many TV electrical and mechanical parts have special safety-related characteristics some of which are often not evident from visual inspection, nor can the protection they give necessarily be obtained by replacing them with components rated for higher voltage, wattage, etc. Parts that have special safety characteristics are identified in Hitachi service data by shading on schematics and by a ⚠ in the parts list. Use of substitute replacement that does not have the same safety characteristics as the recommended replacement part in Hitachi service data parts list might create shock, fire, and/or other hazards. Product safety is under review continuously and new instructions are issued whenever appropriate. For the latest information, always consult the appropriate current Hitachi service literature. A subscription to, or additional copies of service literature may be obtained at a nominal charge from Hitachi.

SERVICING PRECAUTIONS

CAUTION: Before servicing instruments covered by this service data and its supplements and addenda, read and follow the SAFETY PRECAUTIONS on page 3 of this publication.

NOTE: If unforeseen circumstances create conflict between the following servicing precautions and any of the safety precautions on page 3 of this publication, always follow the safety precautions. Remember: Safety First.

General Servicing Guidelines

1. Always unplug the instrument AC power cord from the AC power source before:
   a. Removing or reinstalling any component, circuit board, module, or any other instrument assembly.

   b. Disconnecting or reconnecting any instrument electrical plug or other electrical connection.

   c. Connecting a test substitute in parallel with an electrolytic capacitor in the instrument.
   CAUTION: A wrong part substitution or incorrect polarity installation of electrolytic capacitors may result in an explosion hazard.

   d. Discharging the picture tube anode.

2. Test high voltage only by measuring it with an appropriate high voltage meter or other voltage measuring device (DVM, FETVOM, etc.) equipped with a suitable high voltage probe. Do not test high voltage by "drawing an arc." The H.V. Distribution Box has an internal 400MΩ resistor (bleeder resistor) connected from the high voltage to ground. After power is removed from the instrument the high voltage will discharge through the high voltage bleeder resistor. If the tubes have high voltage after power is removed, then the bleeder resistor is defective or the bleeder ground is disconnected.

3. Discharge the picture tube's anode at any of the R, G, or B outputs on the H.V. Distribution Box only by (a) first connecting one end of an insulated clip lead to the degaussing or kine aquadag grounding system shield at the point where the picture tube socket ground lead is connected, and then (b) touch the other end of the insulated clip lead to the picture tube high voltage distribution box R, G, or B output, using an insulated handle to avoid personal contact with high voltage.

4. Do not spray chemicals on or near this instrument or any of its assemblies.

5. Unless specified otherwise in these service data, clean electrical contracts by applying the following mixture to the contacts with a pipe cleaner, cotton-tipped stick or comparable nonabrasive applicator: 10% (by volume) Acetone and 90% (by volume) isopropyl alcohol (90%-99% strength).
   CAUTION: This is a flammable mixture. Unless specified otherwise in these service data, lubrication of contacts is not required.

6. Do not defeat any plug/socket B+ voltage interlocks with which instruments covered by this service data might be equipped.

7. Do not apply AC power to this instrument and/or any of its electrical assemblies unless all solid-state device heat-sinks are correctly installed.

8. Always connect the test instrument ground lead to the appropriate instrument chassis ground before connecting the test instrument positive lead. Always remove the test instrument ground lead last.

9. Use with this instrument only the test fixtures specified in this service data.
   CAUTION: Do not connect the test fixture ground strap to any heatsink in this instrument.

Electrostatically Sensitive (ES) Devices

Some semiconductor (solid state) devices can be damaged easily by static electricity. Such components commonly are called Electrostatically Sensitive (ES) Devices. Examples of typical ES devices are integrated circuits and some field-effect transistors and semiconductor "chip" components. The following techniques should be used to help reduce the incidence of component damage caused by static electricity.

1. Immediately before handling any semiconductor component or semiconductor-equipped assembly, drain off any electrostatic charge on your body by touching a known earth ground. Alternatively, obtain and wear a commercially available discharging wrist strap device, which should be removed for potential shock reasons prior to applying power to the unit under test.

2. After removing an electrical assembly equipped with ES devices, place the assembly on a conductive surface such as aluminum foil, to prevent electrostatic charge buildup or exposure of the assembly.

3. Use only a grounded-tip soldering iron to solder or desolder ES devices.

4. Use only can anti-static type solder removal device. Some solder removal devices not classified as "anti-static" can generate electrical charges sufficient to damage ES device.

5. Do not use freon-propelled chemicals. These can generate electrical charges sufficient to damage ES devices.

6. Do not remove a replacement ES device from its protective package until immediately before you are ready to install it. (Most replacement ES devices are packaged with leads electrically shorted together by conductive foam, aluminum foil or comparable conductive material.)

7. Immediately before removing the protective material from the leads of a replacement ES device, touch the protective material to the chassis or circuit assembly into which the device will be installed.
   CAUTION: Be sure no power is applied to the chassis or circuit, and observe all other safety precautions.

8. Minimize bodily motions when handling unpackaged replacement ES devices. (Otherwise harmless motion such as the brushing together of your clothes fabric or the lifting of your foot from a carpeted floor can generate static electricity sufficient to damage an ES device.)

General Soldering Guidelines

1. Use a grounded-tip, low-wattage soldering iron and appropriate tip size and shape that will maintain tip temperature within the range 500°F to 600°F.

2. Use an appropriate gauge of resin-core solder composed of 60 parts tin/40 parts lead.

3. Keep the soldering iron tip clean and well-tinned.

4. Thoroughly clean the surfaces to be soldered. Use a small wire-bristle (0.5 inch or 1.25 cm) brush with a metal handle. Do not use freon-propelled spray-on cleaners.

5. Use the following desoldering technique.
   a. Allow the soldering iron tip to reach normal temperature (500°F to 600°F).

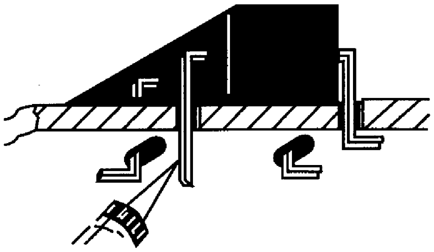
   b. Heat the component lead until the solder melts. Quickly draw away the melted solder with an anti-static, suction-type solder removal device or with solder braid.
   CAUTION: Work quickly to avoid overheating the circuit board printed foil.

6. Use the following soldering technique.
   a. Allow the soldering iron tip to reach normal temperature (500°F to 600°F).

   b. First, hold the soldering iron tip and solder strand against the component lead until the solder melts.

   c. Quickly move the soldering iron tip to the junction of the component lead and the printed circuit foil, and hold it there only until the solder flows onto and around both the component lead and the foil.
   CAUTION: Work quickly to avoid overheating the circuit board printed foil or components.

   d. Closely inspect the solder area and remove any excess or splashed solder with a small wire-bristle brush.



Use Solding Iron to Pry Leads

IC Removal/Replacement

Some Hitachi unitized chassis circuit boards have slotted holes (oblong) through which the IC leads are inserted and then bent flat against the circuit foil. When holes are the slotted type, the following technique should be used to remove and replace the IC. When working with boards using the familiar round hole, use the standard technique as outlined in paragraphs 5 and 6 above.

Removal

1. Desolder and straighten each IC lead in one operation by gently prying up on the lead with the soldering iron tip as the solder melts.2. Draw away the melted solder with an anti-static suction-type solder removal device (or with solder braid) before removing the IC.

Replacement

1. Carefully insert the replacement IC in the circuit board.

2. Carefully bend each IC lead against the circuit foil pad and solder it.

3. Clean the soldered areas with a small wire-bristle brush. (It is not necessary to reapply acrylic coating to areas.)

"Small-signal" Discrete Transistor Removal/Replacement

1. Remove the defective transistor by clipping its leads as close as possible to the component body.

2. Bend into a "U" shape the end of each of three leads remaining on the circuit board.

3. Bend into a "U" shape the replacement transistor leads.

4. Connect to replacement transistor leads to the corresponding leads extending from the circuit board and crimp the "U" with long nose pliers to insure metal to metal contact, then solder each connection.

Power Output Transistor Devices Removal/Replacements

1. Heat and remove all solder from around the transistor leads.

2. Remove the heatsink mounting screw (if so equipped).

3. Carefully remove the transistor from the circuit board.

4. Insert new transistor in circuit board.

5. Solder each transistor lead, and clip off excess lead.

6. Replace heatsink.

Diode Removal/Replacement

1. Remove defective diode by clipping its leads as close as possible to diode body.

2. Bend the two remaining leads perpendicularly to the circuit board.

3. Observing diode polarity, wrap each lead of the new diode around the corresponding lead on the circuit board.

4. Securely crimp each connection and solder it.

5. Inspect (on the circuit board copper side) the solder joints of the two "original leads". If they are not shiny, reheat them and, if necessary, apply additional solder.

Fuses and Conventional Resistor Removal/Replacement

1. Clip each fuse or resistor lead at top of circuit board hollow stake.

2. Securely crimp leads of replacement component around stake 1/8 inch from top.

3. Solder the connections.
   CAUTION: Maintain original spacing between the replaced component and adjacent components and the circuit board, to prevent excessive component temperatures.

Circuit Board Foil Repair

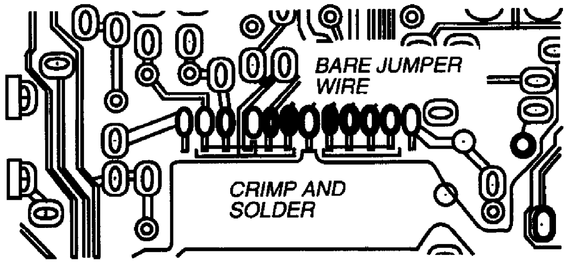
Excessive heat applied to the copper foil of any printed circuit board will weaken the adhesive that bonds the foil to the circuit board, causing the foil to separate from, or "lift-off," the board. The following guidelines and procedures should be followed whenever this condition is encountered.

In Critical Copper Pattern Areas
High component/copper pattern density and/or special voltage/current characteristics make the spacing and integrity of copper pattern in some circuit board areas more critical than in others. The circuit foil in these areas is designated as Critical Copper Pattern. Because Critical Copper Pattern requires special soldering techniques to ensure the maintenance of reliability and safety standards, contact your Hitachi personnel.

At IC Connections
To repair defective copper pattern at IC connections, use the following procedure to install a jumper wire on the copper pattern side of the circuit board. (Use this technique only on IC connections.)

1. Carefully remove the damaged copper pattern with a sharp knife. (Remove only as much copper as absolutely necessary.)

2. Carefully scratch away the solder resist and acrylic coating (if used) from the end of the remaining copper pattern.

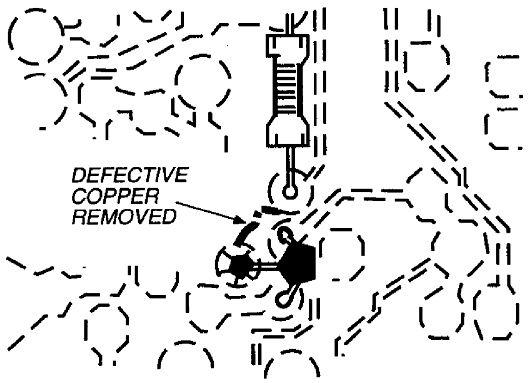


Install Jumper Wire and Solder

3. Bend a small "U" in one end of a small-gauge jumper wire and carefully crimp it around the IC pin. Solder the IC connection.

4. Route the jumper wire along the path of the cut-away copper pattern and let it overlap the previously scraped end of the good copper pattern. Solder the overlapped area, and clip off any excess jumper wire.

At Other Connections
Use the following technique to repair defective copper pattern at connections other than IC Pins. This technique involves the installation of a jumper wire on the component side of the circuit board.



Insulated Jumper Wire

1. Remove the defective copper pattern with a sharp knife. Remove at least 1/4 inch of copper, to ensure hazardous condition will not exist if the jumper wire opens.

2. Trace along the copper pattern from both wire sides of the pattern break and locate the nearest component directly connected to the affected copper pattern.

3. Connect insulated 20-gauge jumper wire from the nearest component on one side of the pattern break to the lead of the nearest component on the other side. Carefully crimp and solder the connections.
   CAUTION: Be sure the insulated jumper wire is dressed so that it does not touch components or sharp edges.

Frequency Synthesis (FS) Tuning Systems

1. Always unplug the instrument AC power cord before disconnecting or reconnecting FS tuning system cables and before removing or inserting FS tuning system modules.

2. The FS tuner must never be disconnected from the FS tuning control module while power is applied to the instrument.

3. When troubleshooting intermittent problems that might be caused by defective cable connection(s) to the FS tuning system, remove the instrument AC power as soon as the defective connector is found and finish confirming the bad connection with a continuity test. This procedure will reduce the probability of electrical overstress of the FS system semi-conductor components.

NOTE: ***These components are affixed with glue. Be careful not to break or damage any foil under the component or at the pins of the ICs when removing. Usually applying heat to the component for a short time while twisting with tweezers will break the component loose.***

Leadless Chip Components (surface mount)

Chip components must be replaced with identical chips due to critical foil track spacing. There are no holes in the board to mount standard transistors or diodes. Some chip capacitor or resistor board solder pads may have holes through the board, however the hole diameter limits standard resistor replacement to 1/8 watt. Standard capacitors may also be limited for the same reason. It is recommended that identical chip components be used..

Chip resistors have a three digit numerical resistance code -1st and 2nd significant digits and a multiplier. Example: 162 = 1600 or 1.6K resistor, 0 = 0 (jumper). Chip capacitors generally do not have the value indicated on the capacitor. The color of the component indicates the general range of the capacitance.

Chip transistors are identified by a two letter code. The first letter indicates the type and the second letter, the grade of transistor.

Chip diodes have a two letter identification code as per the code chart and are a dual diode pack with either common anode or common cathode. Check the parts list for correct diode number.

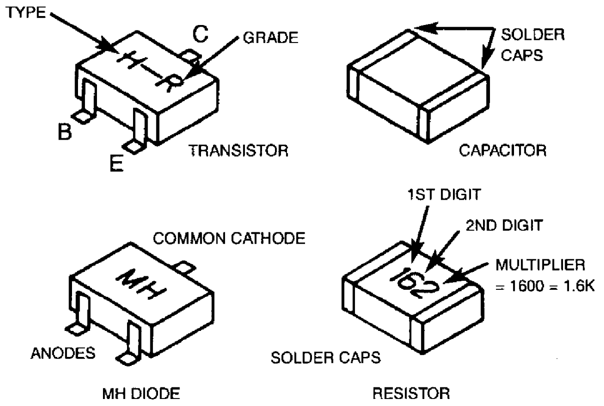
Component Removal

1. Use solder wick to remove solder from component end caps or terminals.
2. Without pulling up, carefully twist the component with tweezers to break the adhesive.
3. Do not reuse removed leadless or chip components since they are subject to stress fracture during removal .

Chip Component Installation

1. Put a small amount of solder on the board soldering pads.
2. Hold the chip component against the soldering pads with tweezers or with a miniature alligator clip and apply heat to the pad area with a 30 watt iron until solder flows. Do not apply heat for more than 3 seconds

Chip Components



TRANSISTOR

CAPACITOR

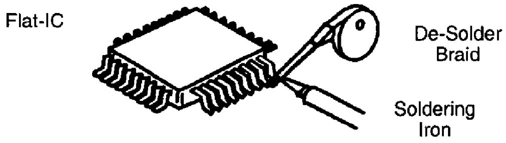
MH DIODE

RESISTOR

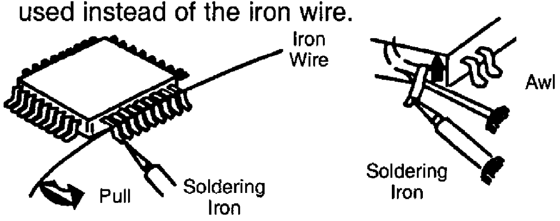
How to Replace Flat-IC —Required Tools—

- Soldering iron
- De-solder braids
- iron wire or small awl
- Magnifier

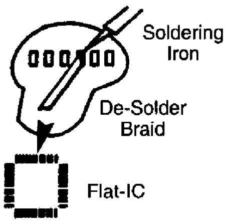
1. Remove the solder from all of the pins of a Flat-IC by using a de-solder braid.



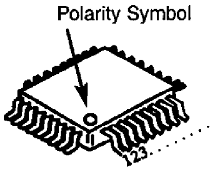
2. Put the iron wire under the pins of the Flat-IC and pull it in the direction indicated while heating the pins using a soldering iron. A small awl can be used instead of the iron wire.



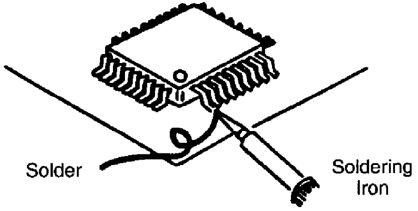
3. Remove the solder from all of the pads of the Fiat-IC by using a de-solder braid.



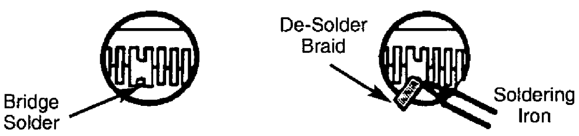
4. Position the new Flat-IC in place (apply the pins of the Flat-IC to the soldering pads where the pins need to be soldered). Properly determine the positions of the soldering pads and pins by correctly aligning the polarity symbol.



5. Solder all pins to the soldering pads using a fine tipped soldering iron.



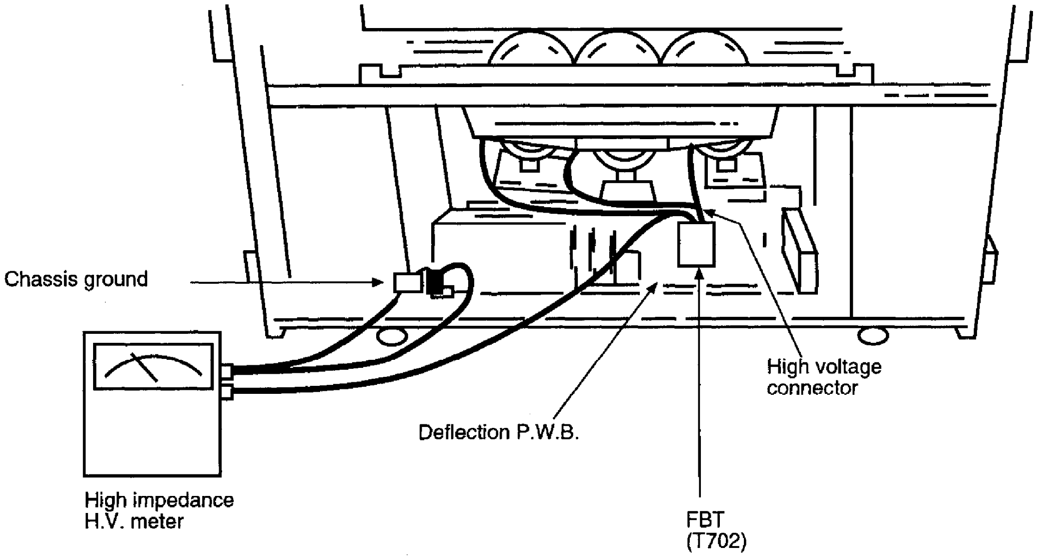
6. Check with a magnifier for solder bridge between the pins or for dry joint between pins and soldering pads. To remove a solder bridge, use a de-solder braid as shown in the figure below.



TECHNICAL CAUTIONS

High Voltage limiter circuit operation check.

1. Turn off TV and connect jig as shown in Figure 2. Adjust jig fully counter-clockwise for minimum resistance.
2. Set the AC input to 120V AC and turn on TV.
3. Confirm test pattern on CRT is a usable picture, then slowly adjust jig until the picture disappears and TV shuts down.
4. When the limiter circuit is operating properly, High Voltage will be less than 36.5 kV at 0.6mA when TV shuts down.
5. Turn off set immediately after checking circuit operation.
6. Unplug set for one minute to reset shutdown circuit. Remove jig and voltmeter.


Chassis ground
High impedance
H.V. meter
Deflection P.W.B.
High voltage
connector
FBT
(T702)

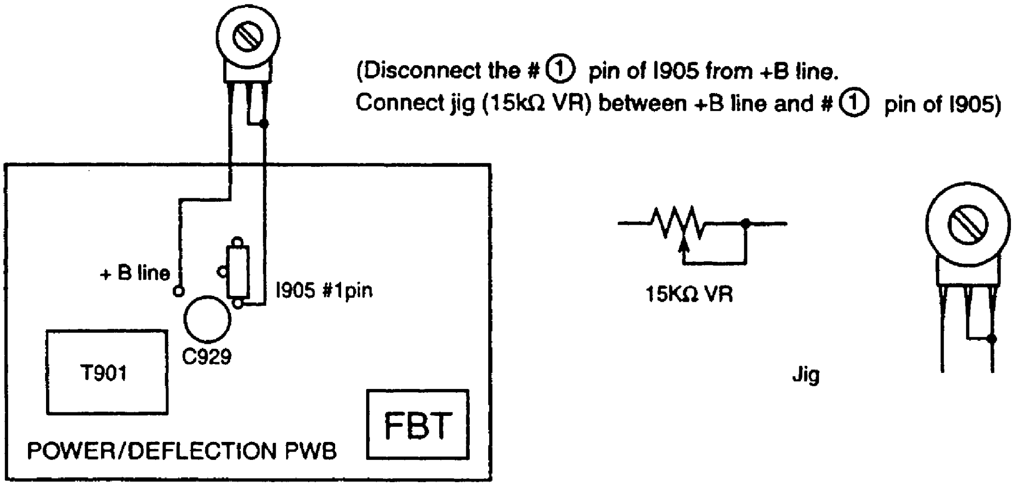

**(Disconnect the # ① pin of I905 from +B line.
Connect jig (15kΩ VR) between +B line and # ① pin of I905)**
+ B line
I905 #1pin
C929
T901
FBT
POWER/DEFLECTION PWB
15KΩ VR
Jig

Fig. 2. Deflection/Power P.C.B.

SPECIFICATIONS

Model:	50CX29B/50EX39B 60CX29B/60EX39B
Cathode-Ray Tube:	R=180DLB22R G=180DLB22G B=180DLB22B
Power Input:	120 volts AC, 60 Hz
Power Consumption:	175 Watts - Maximum 146 Watts - Operating
Antenna Impedance:	75 ohm Unbalanced VHF / UHF / CATV

Receiving Channel:

BAND	CH
VHF	2~13
UHF	14~69
EXT. Mid	(A-5)~(A-1), 4+
CATV Mid.	A~I
CATV Super	J~W
CATV Hyper	(W+1)~(W+28)

Intermediate Frequency:	Picture I-F Carrier 45.75 MHz Sound I-F Carrier 41.25 MHz Color Sub Carrier 42.17 MHz
Video Input:	1 Volt p-p, 75 Ohm 1 Volt p-p, 75 Ohm (Y) 0.7 Volt p-p, 75 Ohm, (Cb, Cr)
Video Output:	1 Volt p-p, 75 ohm
Audio Input:	470 mVrms, 47 k Ohm
Stereo Audio Output:	470 mVrms, 1 k Ohm
Audio Output Power:	Front – 12 watts at 10% distortion, 8 ohm Impedance Max output – 15 watts
Anode Voltage:	35.0 ± 1.5kv (contrast, brightness=max)

Brightness:

Contrast:	Max	50CX29B/50EX39B	190 cd/m^2
Brightness:	Max	60CX29B/60EX39B	130 cd/m^2
(White Screen)			

Speakers:	2 Woofers - 5 inch (12 cm) round

Dimension:

	50EX39B/ 50CX29B	60EX39B/ 60CX29B
Height (in.)	51 7/8	60 1/2
Width (in.)	43 1/2	51 3/8
Depth (in.)	23 3/4	26 5/8
Weight (lbs.)	185	305

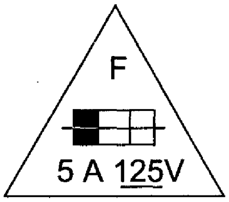
Circuit Board Assemblies:

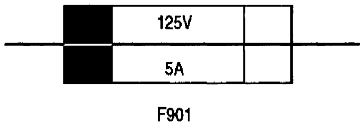
C.P.T. (B) P.W.B.	Terminal P.W.B.
C.P.T. (G) P.W.B.	VM P.W.B.
C.P.T. (R) P.W.B.	SP Matrix P.W.B.
Signal P.W.B.	Power/Deflection P.W.B.
Signal Sub P.W.B.	Control P.W.B.
Convergence P.W.B.	

CIRCUIT PROTECTION

CAUTION: Below is an EXAMPLE only. See Replacement Parts List for details. The following symbol near the fuse indicates fast operation fuse (to be replaced). Fuse ratings appear within the symbol.

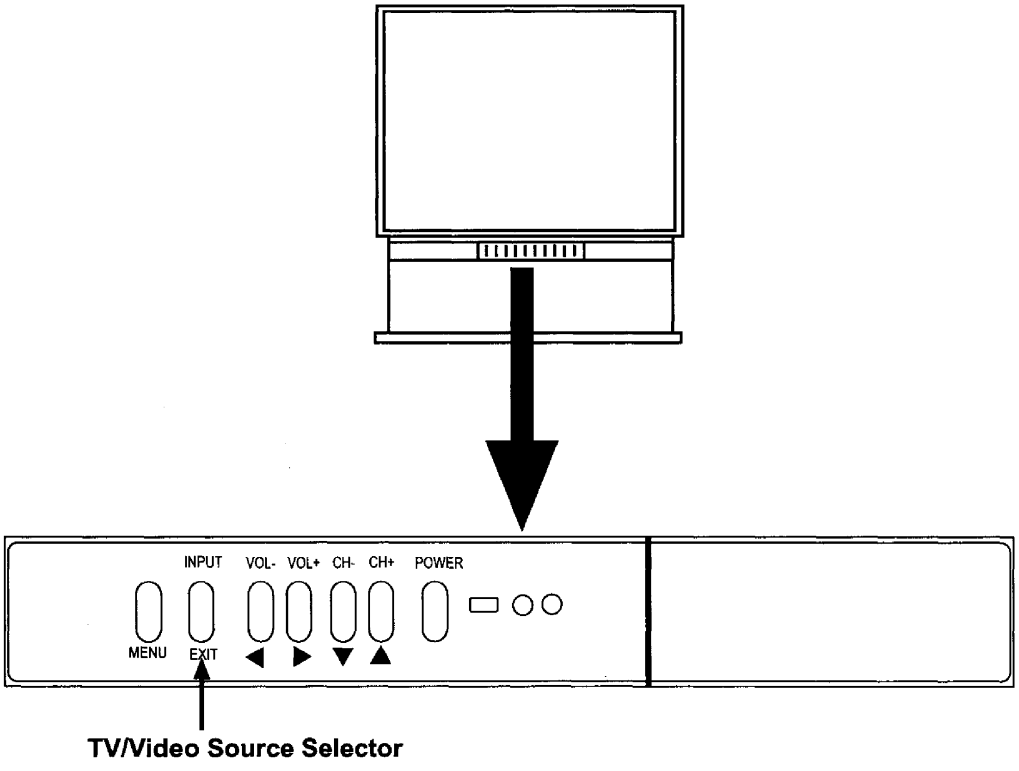
Example:





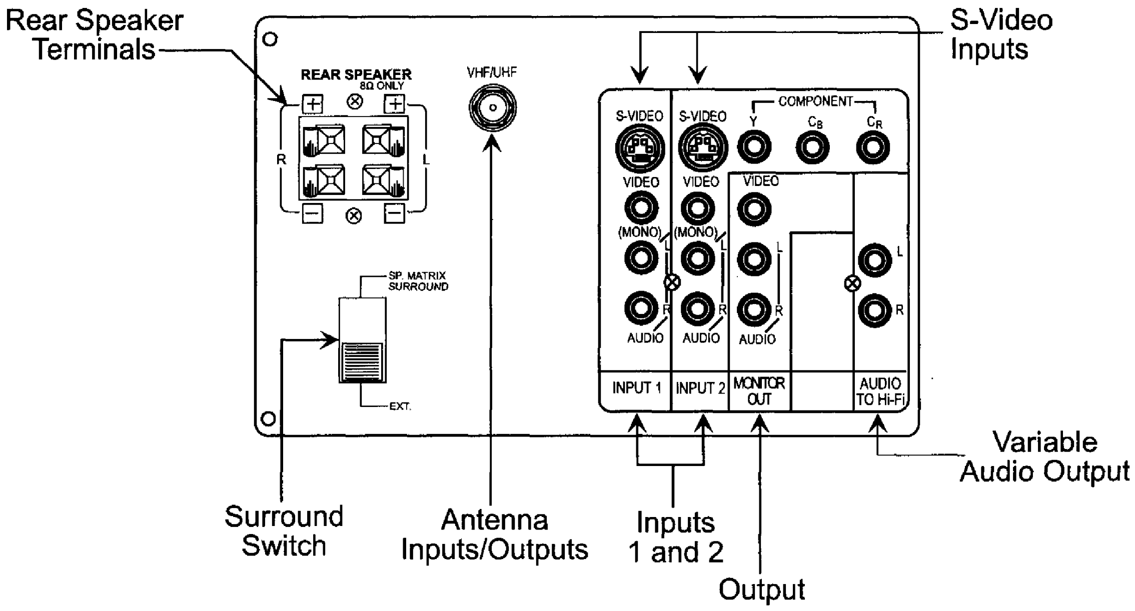
"RISK OF FIRE - REPLACE FUSE AS MARKED"

The rating of fuse F901 is 5.0A - 125V.
Replace with the same type fuse for continued protection against fire.


INPUT
VOL-
VOL+
CH-
CH+
POWER
MENU
EXIT
◀
▶
▼
▲

TV/Video Source Selector

Fig. 3. Control Panel


REAR SPEAKER
8Ω ONLY
R
L
VHF/UHF
SP. MATRIX
SURROUND
EXT.
S-VIDEO
S-VIDEO
COMPONENT
Y
CB
CR
VIDEO
VIDEO
VIDEO
(MONO)
(MONO)
L
R
L
R
AUDIO
AUDIO
AUDIO
INPUT 1
INPUT 2
MONITOR OUT
AUDIO TO Hi-Fi

Rear Speaker Terminals

S-Video Inputs

Variable Audio Output

Surround Switch

Antenna Inputs/Outputs

Inputs 1 and 2

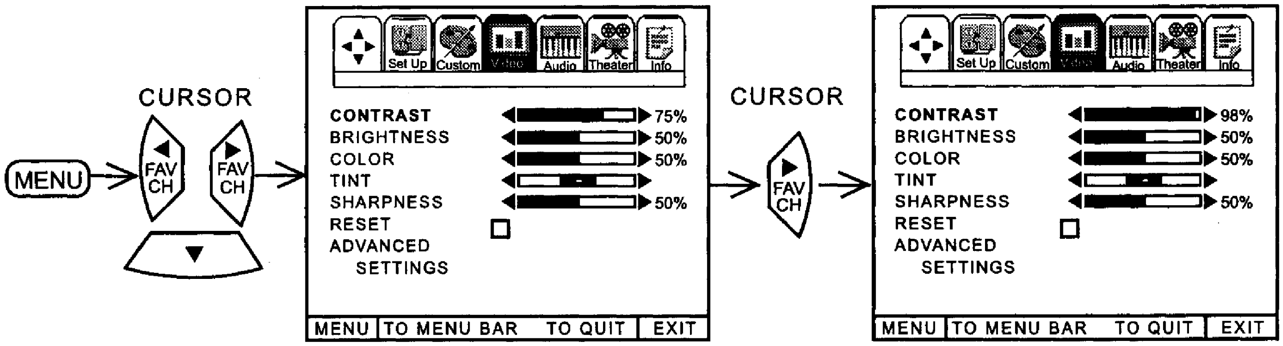
Output

Fig. 4. Rear Connections Panel

CUSTOMIZED PICTURE AND SOUND ADJUSTMENTS

Video

Select VIDEO to adjust picture settings and improve picture quality.



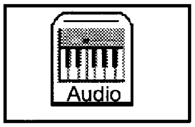
CONTRAST 75%
BRIGHTNESS 50%
COLOR 50%
TINT
SHARPNESS 50%
RESET ☐
ADVANCED SETTINGS
MENU TO MENU BAR TO QUIT EXIT

CONTRAST 98%
BRIGHTNESS 50%
COLOR 50%
TINT
SHARPNESS 50%
RESET ☐
ADVANCED SETTINGS
MENU TO MENU BAR TO QUIT EXIT

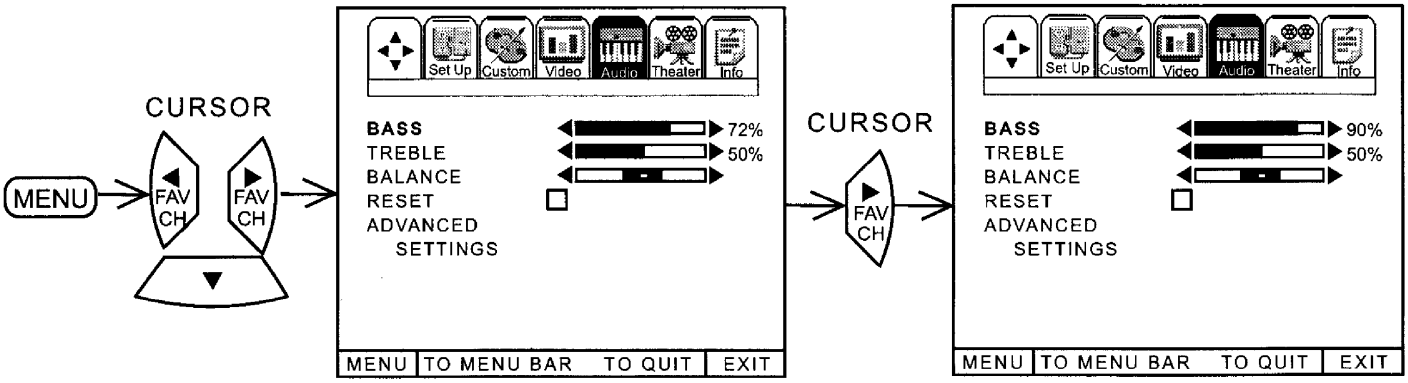
Use the CURSOR ▲ or ▼ buttons to highlight the function to be adjusted.
Press the CURSOR ◀ or ▶ buttons to adjust the function.
Press EXIT to quit menu.

NOTE:
- If CONTRAST is selected, you are adjusting CONTRAST. The additional menu items BRIGHTNESS, COLOR, TINT, and SHARPNESS can be selected and adjusted in the same manner.
- Contrast and Brightness adjustments will affect only the main picture. These adjustments will not affect the sub-picture (PIP Picture).

CONTRAST	Use this function to change the contrast between black and white levels in the picture. This adjustment will only affect the picture when ADVANCED SETTINGS ULTRA AI is OFF.
BRIGHTNESS	Use this function to adjust overall picture brightness.
COLOR	Use this function to adjust the level of color in the picture.
TINT	Use this function to adjust flesh tones so they appear natural. (It may be necessary to adjust TINT to obtain optimum picture quality when using the COMPONENT: Y-C_BC_R Input 2 jacks).
SHARPNESS	Use this function to adjust the amount of fine detail in the picture.
RESET	When RESET is selected, press CURSOR ▶ to return video adjustments to factory preset conditions.



Select AUDIO SETTINGS to adjust the TV to your preference and to improve the sound quality.


CURSOR
MENU
◀ FAV CH
▶ FAV CH
▼
Set Up
Custom
Video
Audio
Theater
Info
BASS 72%
TREBLE 50%
BALANCE
RESET
ADVANCED SETTINGS
MENU
TO MENU BAR
TO QUIT
EXIT
CURSOR
▶ FAV CH
BASS 90%
TREBLE 50%
BALANCE
RESET
ADVANCED SETTINGS
MENU
TO MENU BAR
TO QUIT
EXIT

Use CURSOR ▲ or ▼ to highlight the function to be adjusted.
Press CURSOR ◀ or ▶ to adjust the function.
Press EXIT to quit menu.

NOTE: If BASS is selected you are adjusting BASS. The additional menu items TREBLE and BALANCE can be selected and adjusted in the same manner.

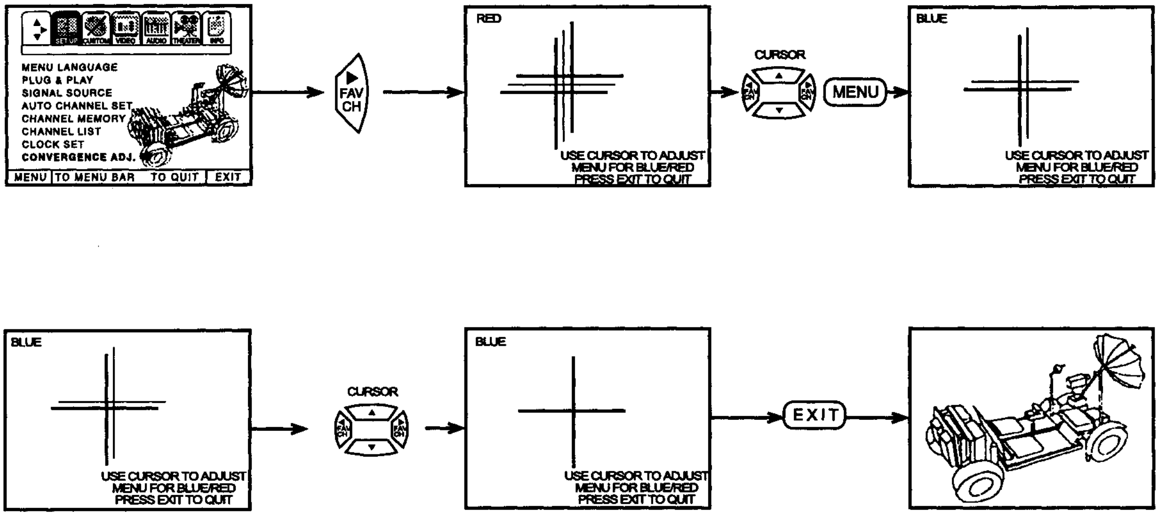
BASS	This function controls the low frequency audio to all speakers.
TREBLE	This function controls the high frequency audio to all speakers.
BALANCE	This function will control the left to right balance of the TV internal speakers, the AUDIO TO HI FI output.
RESET	When RESET is selected, press CURSOR ▶ to return audio adjustments to factory preset conditions.

CONVERGENCE ADJUST

Your Projection TV has three color projection tubes: one for red, one for green, one for blue. When mixed together in the proper proportion, the output of these three colors, however, the beams must be precisely aligned over each other so that the colors can be mixed. The process of aligning these picture beams is called "convergence".

Over a period of time, the picture tubes can drift out of alignment due to normal bumps and vibrations or moving the TV. If you move your TV, or if, after a time, you notice color rings or halos around objects in the picture, you may want to converge (align) the colors.

To simplify convergence, the following feature allows you to display a test pattern of horizontal and vertical lines on the screen. Properly converged, the lines appear white, which is actually a combination of the outputs of the three color tubes. The output of the green tube is stationary. The outputs of the red and blue tubes can be adjusted. When properly aligned, the outputs of all three tubes should be directly over each other to produce the white lines.


SET UP
CUSTOM
VIDEO
AUDIO
THEATER
INFO
MENU LANGUAGE
PLUG & PLAY
SIGNAL SOURCE
AUTO CHANNEL SET
CHANNEL MEMORY
CHANNEL LIST
CLOCK SET
CONVERGENCE ADJ.
MENU
TO MENU BAR
TO QUIT
EXIT
FAV CH
RED
USE CURSOR TO ADJUST
MENU FOR BLUE/RED
PRESS EXIT TO QUIT
CURSOR
MENU
BLUE
USE CURSOR TO ADJUST
MENU FOR BLUE/RED
PRESS EXIT TO QUIT
BLUE
USE CURSOR TO ADJUST
MENU FOR BLUE/RED
PRESS EXIT TO QUIT
CURSOR
BLUE
USE CURSOR TO ADJUST
MENU FOR BLUE/RED
PRESS EXIT TO QUIT
EXIT

Press the CURSOR ▲, ▼ to move the color displayed up or down.

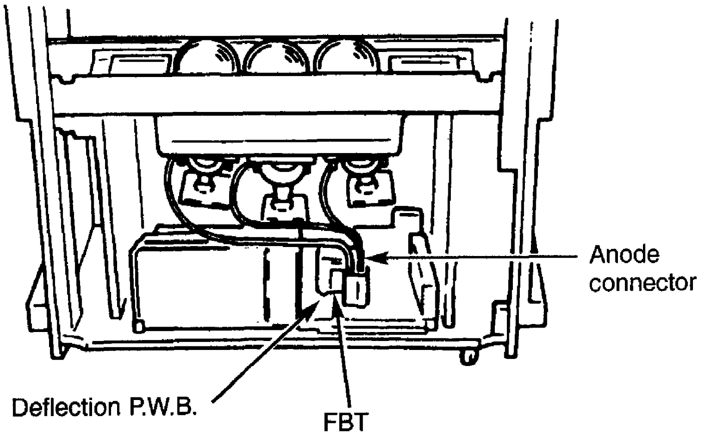
Press the CURSOR ◀, ▶ to move the color displayed left or right.

Press MENU to change the color.

Press EXIT to quit.

CAUTIONS WHEN CONNECTING / DISCONNECTING THE HV CONNECTOR

Perform the following when the HV connector (anode connector) is removed or inserted for CPT replacement, etc.


Anode connector
Deflection P.W.B.
FBT

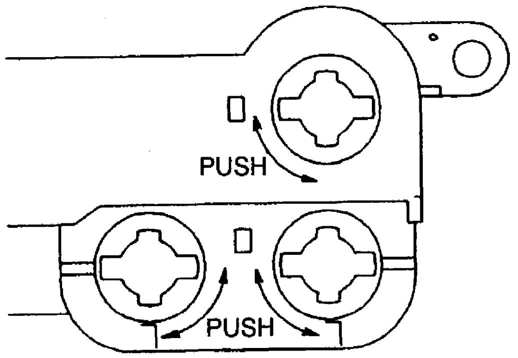

0
PUSH
0
PUSH

Fig. A

During Removal

1. Roll out silicon cover from FBT's contact area slowly.
2. While turning the connector about 90 degrees following the arrow (0 position), push the connector slightly towards the case. (Fig. A)
3. Remove the connector slowly by pulling it away from the case.

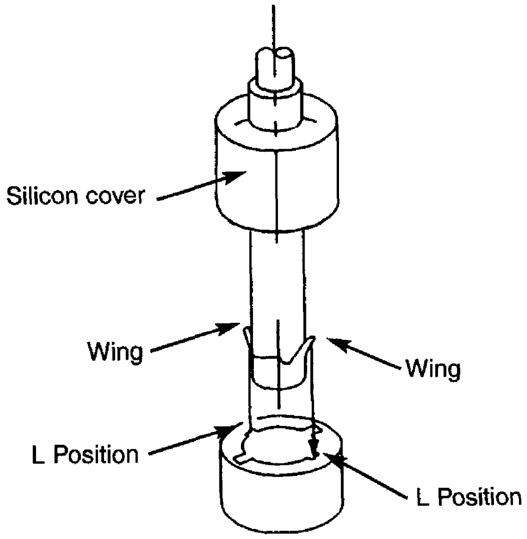

Silicon cover
Wing
Wing
L Position
L Position

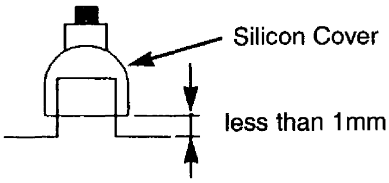
Fig. B

During Insertion

1. Please refer to direction for insertion as shown in Fig. B (L position). Insert connector until "CLICK" sound is heard.
2. Make sure the connector is pressed right in, so that it has a good contact with the spring.
3. Confirm the contact by pulling the connector slightly. (Don't pull hard because it may damage the connector).
4. Cover the high voltage output by carefully pushing silicon cover onto it. (Don't turn the connector).

(REMARK)

1. Make sure the silicon cover is covering the high voltage output.


Silicon Cover
less than 1mm

SERVICE ADJUSTMENTS

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1. ASSEMBLED P.W.B. ADJUSTMENT

1.1 Memory Initialization

Adjustment procedure

(1) Press INPUT key on Control Panel and then Power On to access Video Chroma adjustment mode.

(2) Receive signal on main picture.

(3) Check the OSD according to table below, using ▲▼ buttons on Remote Control.

P.01	AP90/91
SERVICE	0
SUB CONT	1F
SUB COLOR	1A
SUB TINT	40
SUB SHARP	38
EXT RGB BRIGHT	40
EXT RGB CONT	60
BRIGHTNESS	80
* SUB BRIGHT ADJ. □	
INITIAL SET □	

P.02	AP90/91
G DRIVE GAIN	47
B DRIVE GAIN	3A
H POSITION	12
AFC G	0
H BLK END PHASE	0
V BLK PHASE	0
V FREQUENCY	1
V POSITION	0
R-Y POSITION	3
R-Y LEVEL	0
G-Y LEVEL	0
GPPHS	1

P.03	AP90/91
S-TRAC	1
YA	0
Y DL	0
TXACL	1
COLOR A	0
CTL	0
CDE	1
C TRAP	0
TOF FQ	0
TOF Q	0
COLOR SYSTEM	0
DY GAIN	9

P.04	AP90/91
DC T.C. POINT	0
DC T.C. RATIO	0
DC T.C. LIMIT	0
B.E P. LIMIT	0
B.E. P. POINT1	5
B.E. P. POINT2	0
B.L.S.	0
B.L.C.	1
B.S.G.	0
B.D.L.	0
BEARE	0
DC GAIN	6

P.05	AP90/91
WPDL	1
HI BRT	1
OSACL	0
APACON PEAK FO	0
WHITE PEAK	0
D. ABL POINT	0
D. ABL GAIN	7
ABL POINT	5
ABL GAIN	6
(BLANK)	(00)
VAPINV	0B
VAPGAIN	5

P.06	AP90/91
H POSI (CENT)	04 *
V POSI (CENT)	07 *
H DLY OSD	A
V POSI (CENT)	5
1 ST L AFTER V	29
H DLY VBI	2
VIDEO FIELD	1
CLAMP DELAY	34
INITIAL SET □	-

*: Adjustable data
Others: Fixed data (be careful not to change)

(4) Press MENU key to exit VIDEO CHROMA ADJUST mode.

NOTE: (1) If there is a different value than shown in table above, for fixed data, adjust it using ◀ ▶ buttons (only in this case).

(2) When exchanging microprocessor and TV is turned on for first time, it requires initialization of VIDEO CHROMA ADJ on P1 and P6.

(3) Should be changed to OFF for FIRST TIME TOUR at first Power ON by pressing MENU key during FIRST TIME TOUR running.

1.2 Comb filter operation check

Adjustment preparation

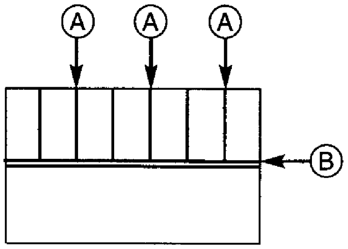
(1) Receive the color bar signal at the regular tuning point.

(2) Set the CONTRAST control to MAX and the other controls to center.

(3) Set the AI to OFF.

Adjustment procedure

(1) Check that between the color bars there are line dots every second color bar as shown in the drawing.



Check Ⓐ and Ⓑ line dots.

LINE	DOTS
Ⓐ	X
Ⓑ	None

1.3 Sub-picture position adjustment

Adjustment preparation

(1) Select signal on main picture.

(2) Video settings have to be at normal condition.

Adjustment procedure

(1) Press the INPUT and POWER button on Control Panel at same time to access VIDEO CHROMA ADJUST mode.

(2) Select H POSI and V POSI using ▲▼ buttons.

(3) Adjust the H POSI (HORIZONTAL) and V POSI (VERTICAL) position using ◀ ▶ buttons.

(4) Press MENU button to exit VIDEO CHROMA ADJUST mode.

(5) Select single PINP mode and move the sub picture, using the MOVE button. Distance between PINP and edge of screen should be equal when moved. If it is not, repeat (1) ~ (5).

2. FINAL ASSEMBLY ADJUSTMENT

2.1 Focus adjustment

Adjustment preparation

(1) The set can face in any direction: west, east, north or south.

(2) Receive the cross-hatch pattern signal.
CONTRAST : HALF
BRIGHTNESS : MINIMUM

(3) The electrical focus adjustment should have been completed.

(4) The centering DY inclination should have been adjusted.

Adjustment procedure

(1) Loosen the fixing screw on the lens cylinder so that the lens cylinder can be turned. (Be careful not to loosen too much. If it is loosened too much, rattling when tightening becomes greater and the focus may drift). After completing steps (5), (6) and (7) below, tighten the fixing screws for each lens with a torque of 12~17 Kgf cm.

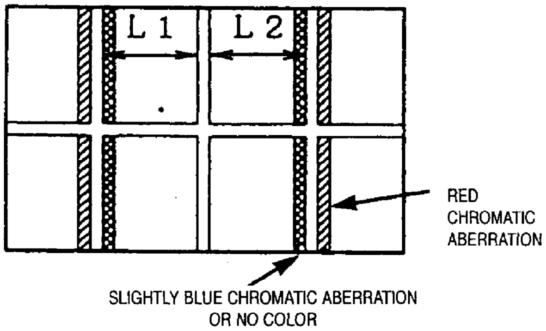
(2) Apply covers to 2 of R, G and B lenses, and project a single color on the screen and adjust in sequence.
(The adjustment order of R, G and B is only an example.)

(3) For each of the R, G and B lenses, observe the color abberation generated on the outer circumference of the cross-hatch bright line at the center section ±3 pitches vertically and horizontally from the center.

(4) If the lens adjustment knob is turned clockwise, viewed from the front, the color aberration changes as follows.

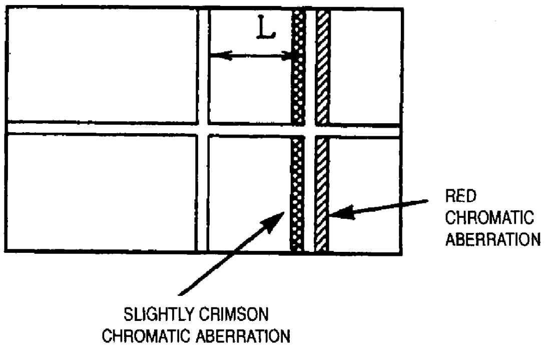
Lens	Change of color aberration
R lens	Red → Crimson
G lens	Blue → Red
B lens	Purple → Green

(5) In case of G lens, set to the point where the chromatic aberration switches from blue to red. If the chromatic aberration appearing all over the screen is not the same, observe the vertical bright line at the center of the screen and set to the position where red chromatic aberration slightly appears inside and blue outside (reference value: 1~3mm) within the cross-hatch pitches specified in next table. When the red chromatic aberration appearing at both sides of the bright line is not equal, observe the side with larger chromatic aberration when adjusting.



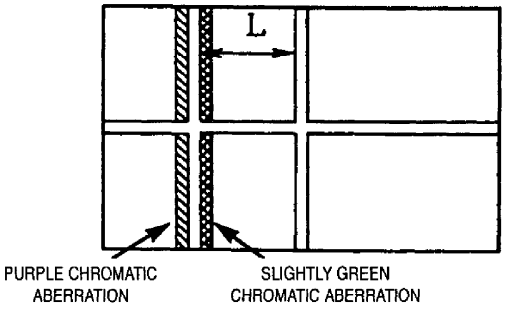
Set Size	Pitch between L
50"	3.0 cross-hatch pitches
60"	3.0 cross-hatch pitches

(6) In case of R lens, set to the position where the chromatic aberration changes from red to crimson. As shown below, observe the vertical bright line at the center and set to the position where the crimson chromatic aberration slightly appears inside and red outside (reference value: 1~3mm) within the cross-hatch pitches specified in next table.



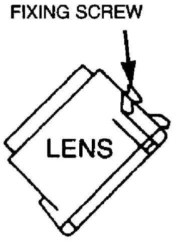
Set Size	Pitch between L
50"	3.0 cross-hatch pitches
60"	3.0 cross-hatch pitches

(7) In case of B lens, set to the position where the chromatic aberration changes from purple to green. As shown below, observe the vertical bright line at the center and set to the position where green chromatic aberration slightly appears inside and purple outside (reference value: 1~3mm) within the cross-hatch pitches specified in next table.

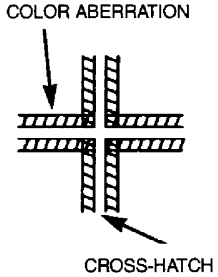

L
PURPLE CHROMATIC ABERRATION
SLIGHTLY GREEN CHROMATIC ABERRATION

Set Size	Pitch between L
50"	3.0 cross-hatch pitches
60"	3.0 cross-hatch pitches

Notes: (1) Fixing screw



(2) Color aberration



(3) Since the G light is very important for picture quality and performance, pay special attention in its adjustment.

Note: Be careful not to touch the lens with your fingers when adjusting.

(4) For red, setting to the center between red and crimson is optimum.

(5) For blue, setting to the center between purple and green is optimum.

2.2 White balance adjustment

(1) Screen adjustment
(2) High brightness white balance.
(3) Low brightness balance.

Screen adjustment VRs	Drive adjustment VRs
Red: on FOCUS PACK	Red: R873 on CPT P.W.B.
Green: on FOCUS PACK	Green: R843 on CPT P.W.B.
Blue: on FOCUS PACK	

Adjustment preparation

(1) Start adjustment 20 minutes or more after the power is turned on.
(2) The vertical incident illumination on the screen should be 20 lux or less.
(3) Set the video settings (CONTRAST: MAX, others: center) to standard condition.
(4) For low brightness white balance adjustment, input a white raster signal level of 0.145 Vp-p (Video input level).
(5) For high brightness white balance adjustment, input a white raster signal level of 0.715Vp-p (Video input level).
(6) Set the drive adjustment VRs (red and green) to 12 - 2 o'clock position.
(7) Turn the screen adjustment VRs (red, green and blue) fully counterclockwise.
(8) Set video advanced setting white control to COOL position.

Adjustment procedure

(1) Go to VIDEO CHROMA ADJUST mode by pressing INPUT and Power button on Control Panel at the same time.
(2) In "SERVICE" mode push ▶ button and screen turns to black. Gradually turn the screen adjustment VRs (red, green, blue) clockwise and set them where the red, green and blue slightly bright lines just appear evenly on the screen.
(3) Push the ▶ button again to return to "Normal" side.
(4) Press "MENU" button to exit VIDEO CHROMA ADJUST.
(5) Select the input signal for high brightness (Video level = 0.715Vpp).
(6) Adjust the high brightness white balance using the drive adjustment VRs (red, green).
(7) Select the signal for low brightness (Video level = 0.145Vpp)
(8) Adjust the low brightness white balance using the screen adjustment VRs (red, green, blue). (Visually adjust).
(9) Check that high brightness white balance is obtained. If it does not, return to step (7).

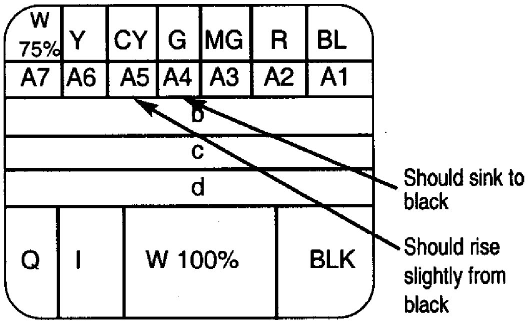
NOTE: Before adjusting the White Balance, check that the screen adjustment VRs are turned fully counterclockwise. Since the phosphorescent surface of the CRT is likely to be burned, be careful.

White balance = 9300° K ± 0MPCD
Color coordinate = x 0.285
y 0.295

2.3 Sub brightness adjustment

Adjustment preparation

(1) Start adjustment 20 minutes or more after the power is turned ON. Receive the color bar signal.
(2) Set the contrast and color controls to minimum.
(3) The vertical incident illumination on the screen should be 20 lux or less.



Adjustment procedure

(1) Go to "Sub Brightness" adjustment in VIDEO CHROMA ADJUST mode (press Input and Power button on Control panel at same time), using ▲ ▼ buttons and then ▶ button.
(2) Then adjust "Sub Brightness" using ◀ ▶ buttons to increase or decrease the value, according to figure. (Visually adjust).
(3) After adjustment, press MENU button to exit VIDEO CHROMA ADJUST mode. (Data is stored in memory).

Note: When selecting SUB-BRIGHTNESS mode the microprocessor sets the CONTRAST and COLOR to MIN. automatically, but make sure that the other conditions are center. Directly observe the screen by eye without using a mirror.

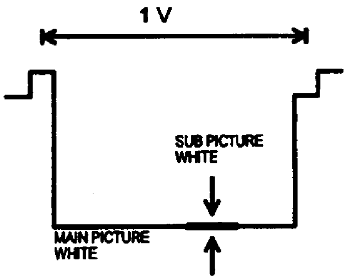
2.4 Sub picture (PIP) white balance adjustment (R0M4, R0M6, R0M8)

Adjustment preparation

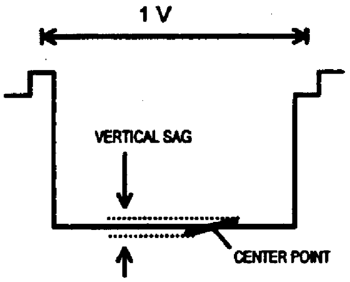
(1) Start adjustment after power is ON for 20 minutes.
(2) Use a white raster signal for adjustment.
(3) Press "FREEZE" on the remote control and select "SINGLE" freeze mode to display the sub picture.
(4) Set CONTRAST to Maximum, Other conditions to center.

Adjustment procedure

(1) Connect oscilloscope to P802 and adjust R0M8 to match blue level of main and sub pictures.
(2) Repeat for P832 and R0M6 Green, P862 and R0M4 for Red.



Note: If the sub picture has a signal sag, adjust level at center point.



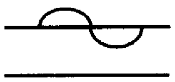
2.5 SP Matrix Check

Adjustment preparation

(1) Input the following audio signals to the audio input of the VIDEO INPUT terminals, when checking SP Matrix:

① R ch: 435mVrms

② L ch: no signal



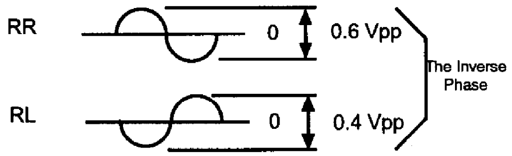
- Set the AUDIO ADVANCED SETTING for INT. SPEAKERS: ON, LOUDNESS: OFF and PERFECT VOLUME: OFF.
- Set the volume control of FRONT to 20 step.
- Set the BALANCE, TREBLE and BASS to Normal.

Note: Front waveform: front speaker output of the set.

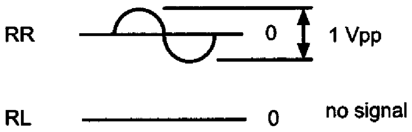
Adjustment procedure

(1) Check that the waveforms shown below are obtained (Input signal ① and ②), at rear SP Terminal Out.

(a) SP MATRIX mode



(b) EXT mode



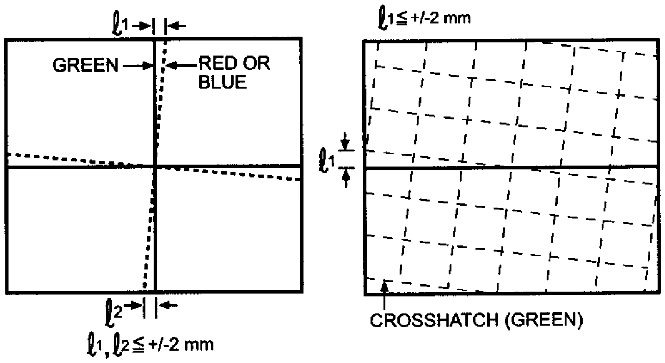
2.6 Raster Inclination adjustment (Deflection Yoke)

Adjustment preparation

(1) The set can face east or west.
(2) Input the single cross test signal.
(3) CONTRAST: MAX
BRIGHTNESS: CENTER
(4) The lens focus adjustment should have been completed.
(5) The electric focus should have been coarse adjusted.
(6) The dynamic convergence should have been coarse adjusted. Set the RH-skew (RU82), BH-Skew (RUE3), RV-Skew (RU25), BV-Skew (RU53), GV-Center (RUN5), GH-Center (RUN9), BV-Center (RUP4), BH-Center (RUP8), RV-Center (RUQ3), and RH-Center (RUQ7) adjustment VRs to their mechanical centers.
(7) Start adjustment 20 minutes or more after TV is turned on.

Adjustment procedure

(1) Apply covers to the R and B lenses and project only green light.
(2) Turn the G deflection yoke and adjust the vertical raster inclination.
(3) Then, remove the cover of R or B lens and project red or blue light and green light together on the screen.
(4) Turn the deflection yoke of R or B and set so that the inclination of R or B with respect to the green light is as shown below on the top and bottom sides.
(5) After raster inclination adjustment, fixing screw of DY should be screwed with 12±2kg•cm torque.



2.7 Raster position adjustment

Adjustment preparation

(1) The same as item 2.6. (1)~(7)

(2) The raster inclination adjustment should have been completed.

(3) Horizontal AFC adjustment should have been completed.

(4) Apply marking using the tape, etc. at the positions on the screen as shown in Fig. 2-7.

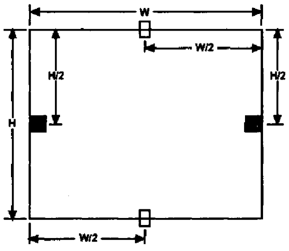


Fig. 2-7

Adjustment procedure

(1) Apply covers to the R lens and B lens, and project only green light on the screen.

(2) Use the green centering magnet and adjust so that the vertical and horizontal lines of the cross pattern match the position where the markings have been applied.

(3) Then remove the cover of R lens or B lens, and project the red or blue light and green light on the screen.

(4) Turn the R or B centering magnet to match the color with the green light.

Note: (1) Spec for green centering vertical direction ±3mm horizontal direction ±2.5mm.

(2) Center of test pattern with respect to geometrical center of screen:
horzontal within 30mm, vertical within 20mm.

(3) Red and Blue centering with respect to green is ±2mm in both horizontal and vertical directions.

2.8 Pincushion distortion and keystone distortion correction

Adjustment preparation

(1) The screen can face any direction, north, south, east and west.

(2) Display the cross-hatch pattern signal.

(3) The focus adjustment of the G lens should have been completed.

(4) The G raster (deflection yoke) inclination should have been adjusted.

(5) The vertical amplitude and horizontal amplitude should have been coarse adjusted.

(6) Set the GV-Center (RUN5) and GH-Center (RUN9) adjustment VRs to their machanical centers.

Adjustment procedure

(1) Project only G on the screen using any one of following procedures.
  a. Apply covers to the R and B lenses.
  b. Short-cicuit 2P sub mini connectors plug pins of the R and B CPT P.W.B.

(2) Adjust the horizontal line of the G according to the procedure shown in Table 2-1.

(3) Adjust the vertical line of the G according to the procedure shown in Table 2-2.

Note: (1) The positions of the adjustment VRs are shown in Fig. 2-17-2. The movement of the bright lline corresponding to each VR is shown in Fig. 2-17-1.

(2) After this adjustment, check the raster position, vertical amplitude and horizontal amplitude of the G and adjust finally.

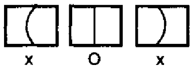
Table 2-1. The pincushion and keystone distortion correction of the horizontal green line (refer to Figs. 2-17-1 and 2-17-2.)

No.	Adjustment Item		Adj. VR	Adjustment Details
1	Lower horizontal line	Upper/lower pincushion distortion GV-PIN	RUF2	Correct the bow distortion of the lower horizontal line and make it a straight line.
2		Upper/lower keystone distortion GV-KEY	RUG1	Remove the inclination of the lower horizontal line.
3	Upper horizontal line	Upper pincushion distortion GV-U-PIN	RUE7	Correct the bow distortion of the upper horizontal line and make it a straight line.
4		Upper keystone distortion GV-U-KEY	RUF6	Remove the inclination of the upper horizontal line.

Note 1. Adjustment procedure of the horizontal line (1) Lower line (RUF2/RUG1) and then (2) Upper line (RUE7/RUF6).

Note 2. Adjust repeatedly as occasion demands.

Table 2-2. The pincushion and keystone distortion correction of the vertical green line (refer to Figs. 2-17-1 and 2-17-2.)

No.	Adjustment Item		Adj. VR	Adjustment Details
1	Center vertical line	Left/right pincushion distortion phase GV-PIN-PHASE	RT26	(1) Approximately correct the bow distortion at both the left and right sides using GH-PIN (RUG9) and GH-L-PIN (RUG5). (2) Turn RT26 to correct the bow distorion of the center vertical line and to make it a straight line. 
2	Right vertical line	Left/right pincushion distortion GH-PIN	RUG9	Correct the bow distortion of the right side vertical line and make it a straight line.
3		Left/right keystone distortion GH-KEY	RUH8	Remove the inclination of the vertical line on the right side.
4	Left side vertical line	Left pincushion distorion GH-L-PIN	RUG5	Correct the bow distortion of the left side vertical line and make it a straight line.
5		Left keystone distortion GH-L-KEY	RUH4	Remove the inclination of the vertical line on the left side.

Note 1. Adjustment procedure of the vertical line (1) Phase (RT26), (2) Lines on right (RUG9/RUH8), and then left side (RUG5/RUH4).

Note 2. Adjust repeatedly as occasion demands.

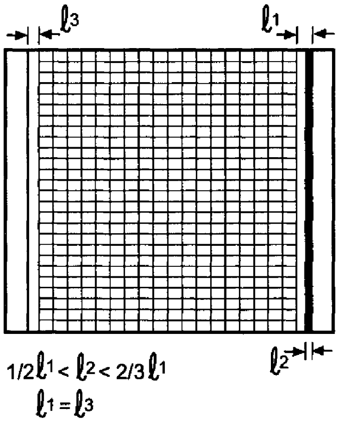
2.9 Horizontal AFC adjustment

Adjustment preparation

(1) Receive the reverse cross-hatch pattern signal. (Cross-hatch lines are black.)
(2) Set CONTRAST to maximum BRIGHTNESS to center.
(3) Lens focus should be completed.
(4) Electrical focus should be coarse adjusted.
(5) Dynamic convergence should be coarse adjusted.
(6) Raster inclination should be completed.

Adjustment procedure

(1) Project only green color. Cover R & B lenses or short 2P mini connectors on CPT P.W.B.'s.
(2) Adjust H-size to minimum. RUL9 fully counterclockwise.
(3) Adjust green centering magnet (located on DY) to shift picture left to display edge of raster.



Note: (1) If raster edge cannot be seen, adjust GH-Pin (RUG9) fully counterclockwise and GH-L-Pin (RUG5) to its mechanical center.
(2) Front and back porch of video should be equal.

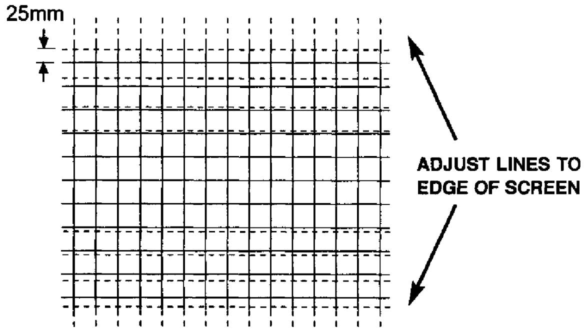
2.10 Vertical amplitude adjustment (RUN3)

Adjustment preparation

(1) Start adjustment more than 20 minutes after the power is turned on.
(2) The pincushion distortion and the keystone distortion adjustment should have been completed.
(3) Receive the crosshatch signal.
(4) Set the CONTRAST control to maximum and BRIGHTNESS control to center.
(5) Apply cover to the R and B lenses or short-circuit the 2P sub-mini plug pins on the R and B CPT P.W.B. and project only Green on the screen.
(6) Set the GV-Center (RUN5) and GH-Center (RUN9) adjustment VRs to their mechanical center.

Adjustment procedure

(1) Adjust RUN3 so that top and bottom edge of crosshatch touch top and bottom edge of screen frame.
(2) Note the position of the first horizontal crosshatch line.
(3) Increase V size so that the horizontal lilne moves up 25mm.



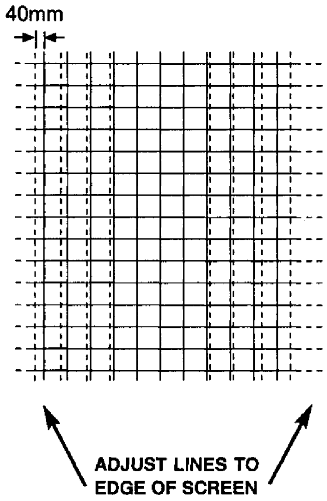
2.11 Horizontal amplitude adjustment (RUL9)

Adjustment preparation

(1) That same as items 2.10 (1)~(6).

Adjustment procedure

(1) Adjust RUL9 so that left and right edge of crosshatch touch left and right edge of screen frame.
(2) Note position of first vertical crosshatch line.
(3) Increase H size (RUL9) so that the vertical line moves to the left 40mm.



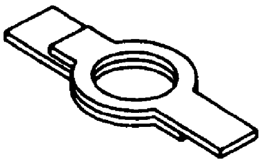
2.12 Beam alignment

Adjustment preparation

(1) Adjust at least 30 minutes after turning on power switch.
(2) Raster inclination, centering, horizontal and vertical amplitudes and optical focus adjustment should be completed.
(3) Set video conditions to factory reset.
(4) Receive cross-hatch signals. (Use of internal cross-hatch signals allowed.)
(5) Short-circuit all metal parts (metal fittings, centering magnet) installed on the projection tubes to GND's of the projection tubes.
Since metal parts are charged with electricity, shocks may be caused if they are not short circuited.

Adjustment procedure

(1) Green (G) tube beam alignment adjustment. Short-circuit 2P subminiature connector plug pins of Red (R) and Blue (B) on the CPT boards and project only Green (G) tube.
(2) Put Green (G) tube beam alignment magnet to the cancel state as shown below.



(3) Turn the Green (G) static focus (Focus Pack) counterclockwise all the way and make sure of position of cross-hatch center on screen. (Halo state.)
(4) Turn the Green (G) static focus (Focus Pack) clockwise all the way. (Blooming state.)
(5) Turn two magnets forming alignment magnet in any desired direction and move cross-hatch center to position found in (3).
(6) If image position does not shift when Green (G) static focus (Focus Pack) is turned. Green (G) beam alignment has been completed.
(7) If image position shifts when Green (G) static focus (Focus Pack) is turned, repeat (2)-(6).
(8) Conduct beam alignment for red (R) focus: Focus Pack UFPK, Blue (B) focus: Focus Pack UFPK.
(9) Upon completion of adjustment, fix beam alignment magnets with white paint.

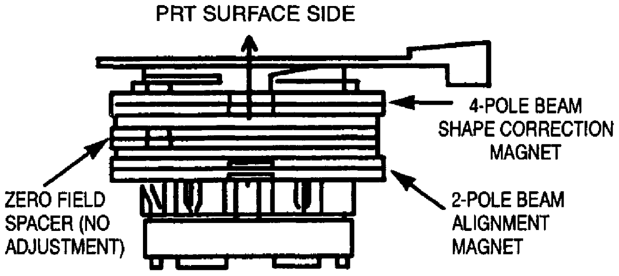
2.13 Beam shape adjustment

Adjustment preparation

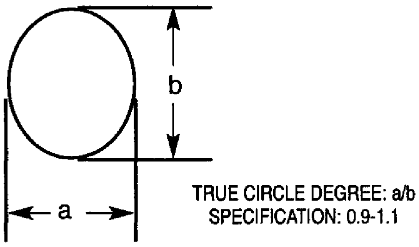
(1) The beam alignment should have been completed.
(2) The raster inclination, centering, horizontal/vertical amplitude and optical focus adjustments should have been completed.
(3) Set video conditions to factory reset.
(4) Input the dot signal.

Adjustment procedure

(1) Green PRT beam shape adjustment. Short-circuit 2P sub-mini connectors on Red and Blue CPT P.W.B.s to project only the Green beam.
(2) Turn the green static focus fully clockwise. (Blooming.)
(3) Make the dot at the screen center a true circle using the 4-pole magnet as shown below.
(4) Also adjust the Red and Blue PRT beam shapes according to the steps (1) to (3).
(5) After the adjustment has been completed, return R, G and B static VRs to the just focus point.


PRT SURFACE SIDE
4-POLE BEAM SHAPE CORRECTION MAGNET
ZERO FIELD SPACER (NO ADJUSTMENT)
2-POLE BEAM ALIGNMENT MAGNET

TRUE CIRCLE SPECIFICATION



2.14 Static focus adjustment

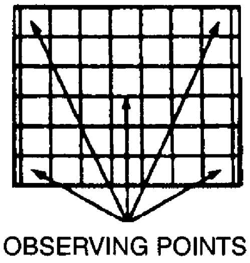
Adjustment preparation

(1) The raster inclination, centering, horizontal/vertical amplitude and optical/electrical focus beam alignment should have been adjusted.
(2) The static convergence data should be cleared.
(3) Set video conditions to factory reset.
(4) Receive the cross-hatch pattern signal.
(5) Apply covers to the lenses of colors other than the color to be adjusted and project a single color.

Adjustment procedure

(1) Red (R), Green (G) and Blue (B) static focus adjustment. Vary the static focus VR (focus pack UFPK) and make the center of the cross-hatch pattern clearest.
(2) Observe the corners of the picture and check that the focus does not get conspicuously worse.

OBSERVING POINTS OF THE CORNER OF THE PICTURE



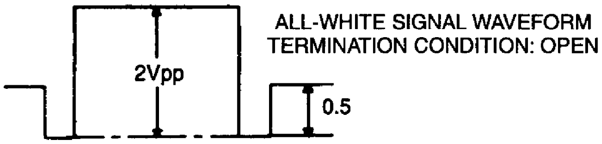
2.15 Blue defocus adjustment

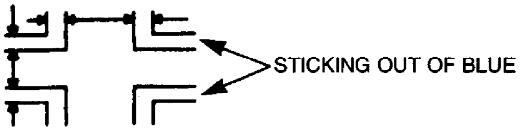
Adjustment Preparation

(1) Optical and electrical focus adjustment should have been completed.
(2) The convergence adjustment should have been completed.
(3) Set Video conditions to factory reset.

Adjustment procedure

(1) Input an all-white signal shown below to VIDEO input.
(2) Short-circuit 2P sub-mini connectors on the red and green CPT P.W.Bs. to display only the blue beam.
(3) Turn the B Focus VR (Focus Pack) fully clockwise.
(4) Measure the brightness at the center of the screen and turn the B FOCUS VR (Focus Pack) counterclockwise to adjust the brightness of blue as shown in Table.
(5) After the adjustment is completed, if blue exceeds the specification, turn and adjust focus so that the sticking out part of blue satisfies the specification.





Defocus sticking out specification

Screen Size	Blue sticking out
50"	1.0mm
60"	1.0mm

Condition: User controls are set to the initial set positions (for shipment) Measuring point Screen center.

Cautions: Correct the brightness gauge and amplitude of the all-white signal periodically. The aperture angle of the brightness gauge is 1°.

Use a cross-hatch pattern to check.

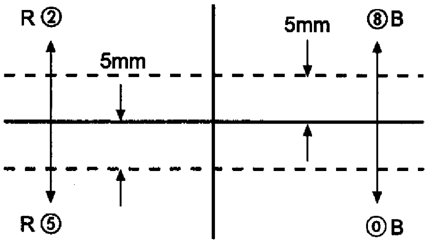
2.16 Static convergence adjustment

Adjustment Preparation

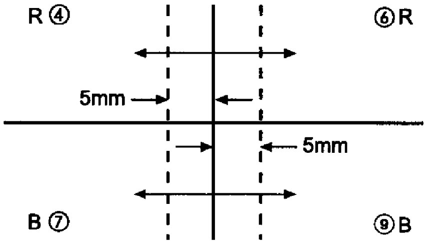
(1) The screen can face east or west.
(2) Display the cross pattern signal or the cross-hatch pattern signal.
(3) R,G and B lens focus adjustment and R, G and B raster inclination adjustment should have been completed.
(4) G raster position adjustment, pincushion distortion, and keystone distortion adjustments should have been completed.
(5) R and B raster position (centering magnet) adjustment should have been completed.
(6) The dynamic convergence should have been coarse adjusted previously.

Adjustment procedure

(1) Set to CONVERGENCE ADJ. mode using the MENU and CURSOR buttons of the remote control.
(2) Check that the variable range of the static convergence adjustment is obtained as shown below using the cursor buttons of the remote control transmitter.
(3) RV,BV



(3) RH,BH



If the adjustment cannot be done, turn the centering magnets for R and B and re-adjust the R and B raster position.

Note: (1) Refer to page 15 for static convergence adjustment.
(2) Return TV set to normal mode by pressing the MENU button on the remote control.
(3) Static convergence is set to standard mode during memory initialization.

2.17 Dynamic convergence adjustment

Adjustment Preparation

(1) The screen can face any direction, north, south, east and west.
(2) Start adjustment 20 minutes or more after the power switch is turned on.
(3) Display the cross-hatch pattern signal.
(4) The following adjustments should have been completed for R,G, and B.
    (a) Lens focus
    (b) Raster (deflection yoke) inclination
    (c) Raster position
(5) The following adjustments should have been completed for the G raster.
    (a) Pincushion distortion
    (b) Keystone distortion
    (c) Vertical amplitude
    (d) Horizontal amplitude
(6) Horizontal AFC adjustment should be completed.
(7) Contrast: Max., Brightness: Center
(8) Static convergence should be set to standard mode (memory initialization).

Adjustment procedure

(1) R adjustment - Match the R with the G following the procedure shown in Tables 2-17-1 and 2-17-2. At the same time, perform the static convergence adjustment of R.
(2) B adjustment - Match the B with the G following the procedure shown in Tables 2-17-1 and 2-17-2. At the same time, perform the static convergence adjustment of B.
(3) Adjust repeatedly so that the amount of misconvergence of all colors is minimized.
    (a) If convergence of the vertical line at the right end is drifted, match it using RUJ3 (red) or RUK2 (blue).
    (b) If convergence of the vertical line at the left end is drifted, match it using RUJ7 (red) or RUK6 (blue).
(4) After adjustment, re-adjust R and B raster position.
(5) After the static convergence adjustment and dynamic convergence adjustment are completed, fix the centering magnet (located on the R and B deflection yokes) using white paint.

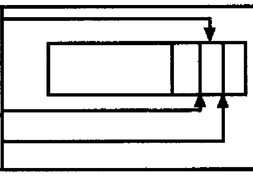
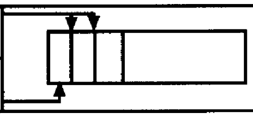
Notes: (1) When adjusting the R, turn off the B using any one of the following procedures as required.
    (a) Short-circuit the 2P subminiature connector plug pins on the B CPT P.W.B.
    (b) Apply cover to the B lens.
(2) When adjusting the B, run off the R using any one of the following procedures as requuired.
    (a) Short-circuit the 2P subminiature connector plug pins on the R CPT P.W.B.
    (b) Apply cover to the R lens.
(3) The position of VRs and the movement of the bright lines are shown in Fig. 2-17-1 and Fig. 2-17-2.

Table 2-17-1. Dynamic convergence adjustment of the horizontal line (RED/BLUE).

No.	Adjustment Item		Adj. VR		Adjustment Details
			RED	BLUE	
1	Horizontal center line	Vertical skew V-SKEW	RU25	RU53	Remove the inclination of the horizontal center line.
2		Veritcal bow V-BOW	RU23	RU51	Correct the bow distortion of the horizontal center line and make it a straight line.
3	Lower horizontal line	Upper/lower pincushion distortion V-PIN	RU05	RU33	Correct the bow distortion of the lower horizontal line and make it a straight line.
4		Upper/lower keystone distortion V-KEY	RU13	RU41	Remove the inclination of the lower horizontal line.
5	Upper horizontal line	Upper pincushion distortion V-U-PIN	RU01	RU29	Correct the bow distortion of the upper horizontal line and make it a straight line.
6		Upper keystone distortion V-U-KEY	RU09	RU37	Remove the inclination of the upper horizontal line.
7	Upper/lower horizontal line	Vertical size V-SIZE	RU19	RU47	Match upper/lower horizontal line with the green line by changing the vertical size.
8		Vertical linearity V-LIN	RU17	RU45	Match upper/lower horizontal line with the green line by changing the linearity.

Note:
1. Adjustment procedure of the horizontal lines (1) Center, (2) Lower, (3) Upper and then (4) Upper/Lower.
2. Accurately match the horizontal center lines (red/blue) with the green line using the centering magnets (item 2.7).
3. The adjustment VRs shown in items 7 and 8 of above table (RU19, RU47, RU17, RU45) as well as BV-Center (RUP4), BH-Center (RUP8), RV-Center (RUQ3), and RH-Center (RUQ7), should have been set to their mechanical centers previously.

Table 2-17-2. Dynamic convergence adjustment of the vertical line (RED/BLUE).

No.	Adjustment Item		Adj. VR		Adjustment Details	
			RED	BLUE		
1	Vertical center line	Horizontal skew H-SKEW	RU82	RUE3	Remove the inclination of the vertical center line.	
2		Horizontal bow H-BOW	RU80	RUE1	Correct the bow distortion of the vertical center line and make it a straight line.	
3	Right side vertical line	Left/right pincushion distortion H-PIN	RU61	RU90	Correct the bow distortion of the right side vertical line and make it a straight line.	
4		Left/right keystone distortion H-KEY	RU69	RU98	Remove the inclination of the right side vertical line.	
5		Horizontal size H-SIZE	RU76	RUA6	Extend 2nd vertical line from the left/right side.	
6		Horizontal linearity H-LIN	RU73	RUA3	Match 2nd vertical line from the right end with green line.	
7		Right end line linearity H-R-LIN	RUJ3	RUK2	Match right end line with the green line.	
8	Left side vertical line	Left pincushion distortion H-L-PIN	RU57	RU86	Correct the bow distortion of the left side vertical line and make it a straight line.	
9		Left keystone distortion H-L-KEY	RU65	RU94	Remove the inclination of the vertical line on the left side.	
10		Left horizontal size H-L-SIZE	RUL1	RUL5	Match left side vertical line with the green line.	
11		Left end line linearity H-L-LIN	RUJ7	RUK6	Match left end vertical line with the green line.	

Note:
1. Adjustment procedure of the vertical lines (1) Center, (2) Right, and then (3) Left line.
2. Accurately match the vertical center lines (red/blue) with the green line using the centering magnets (item 2.7).
3. The adjustment VRs shown in items 5, 6, 7, 10 and 11 (RU76, RUA6, RU73, RUA3, RUJ3, RUK2, RUL1, RUL5, RUJ7 and RUK6) as well as RH-Center (RUQ7), BH-Center (RUP8), should have been set to their mechanical centers previously.
4. Including centering magnets, adjust repeatedly as required.

MOVEMENT OF THE BRIGHT LINE
(This shows the movement of the bright line corresponding to the adjustment VR.)

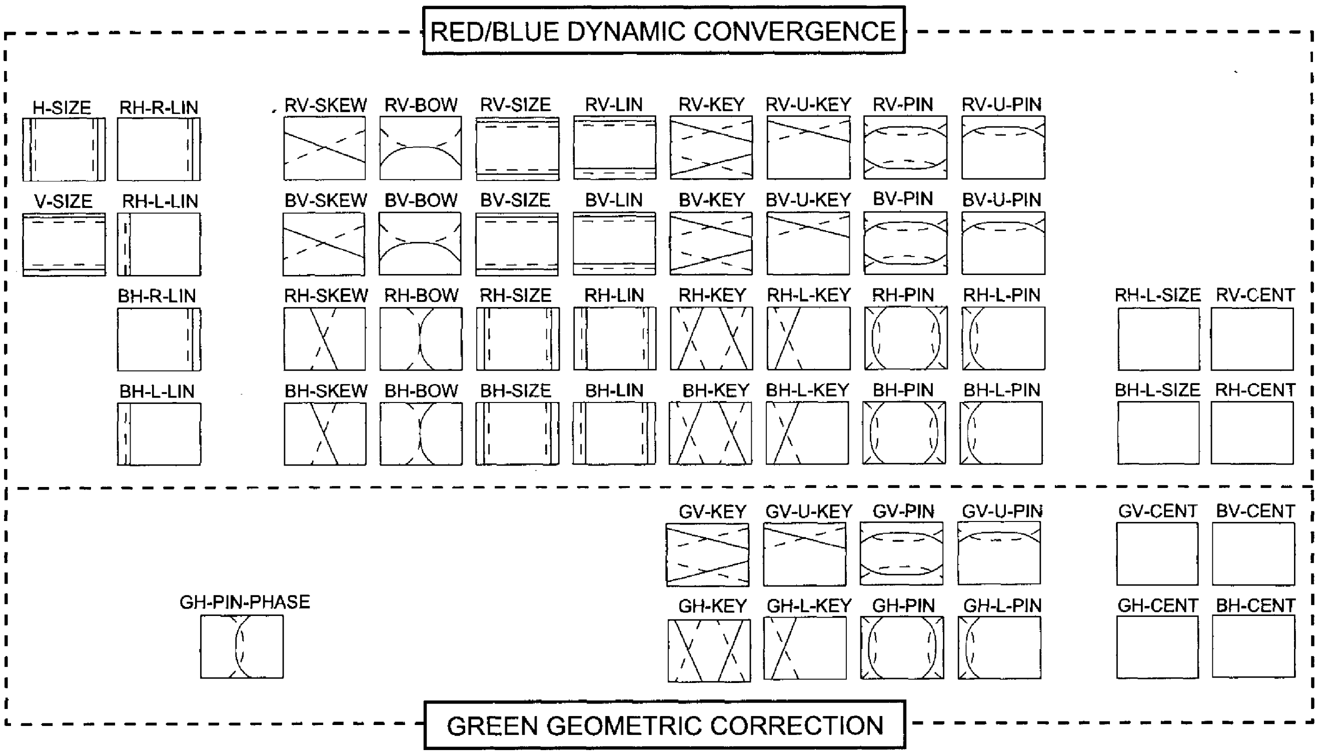

RED/BLUE DYNAMIC CONVERGENCE
H-SIZE
RH-R-LIN
RV-SKEW
RV-BOW
RV-SIZE
RV-LIN
RV-KEY
RV-U-KEY
RV-PIN
RV-U-PIN
V-SIZE
RH-L-LIN
BV-SKEW
BV-BOW
BV-SIZE
BV-LIN
BV-KEY
BV-U-KEY
BV-PIN
BV-U-PIN
BH-R-LIN
RH-SKEW
RH-BOW
RH-SIZE
RH-LIN
RH-KEY
RH-L-KEY
RH-PIN
RH-L-PIN
RH-L-SIZE
RV-CENT
BH-L-LIN
BH-SKEW
BH-BOW
BH-SIZE
BH-LIN
BH-KEY
BH-L-KEY
BH-PIN
BH-L-PIN
BH-L-SIZE
RH-CENT
GV-KEY
GV-U-KEY
GV-PIN
GV-U-PIN
GV-CENT
BV-CENT
GH-PIN-PHASE
GH-KEY
GH-L-KEY
GH-PIN
GH-L-PIN
GH-CENT
BH-CENT
GREEN GEOMETRIC CORRECTION

Fig. 2-17-1

LAYOUT OF THE ADJUSTMENT VR

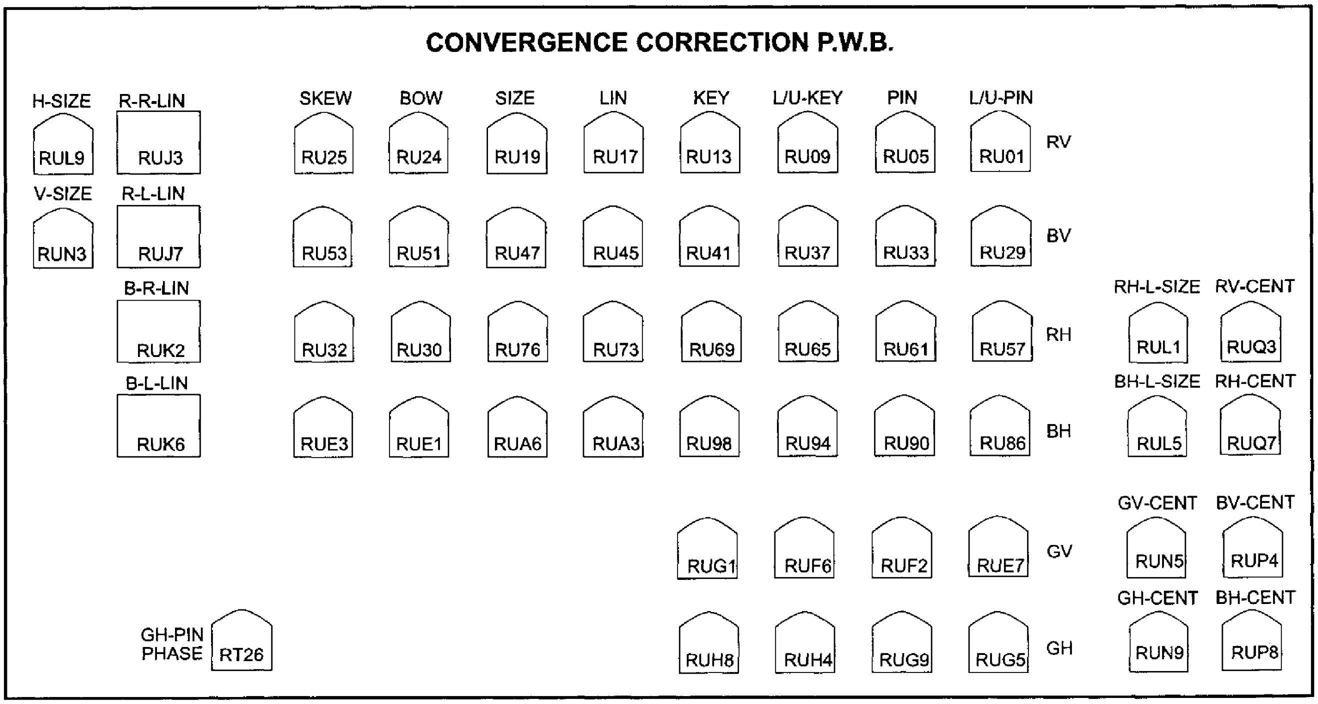
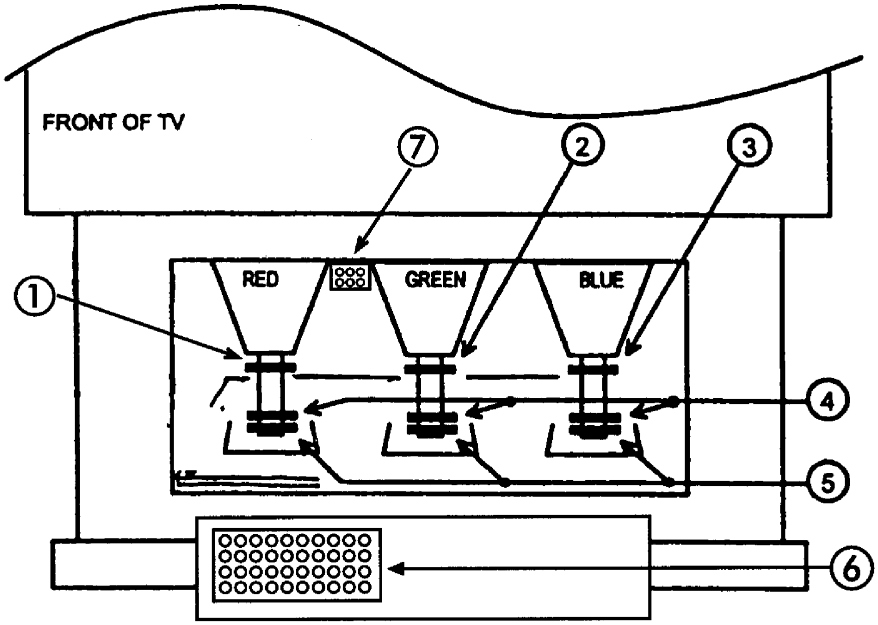

CONVERGENCE CORRECTION P.W.B.
H-SIZE
R-R-LIN
SKEW
BOW
SIZE
LIN
KEY
L/U-KEY
PIN
L/U-PIN
RUL9
RUJ3
RU25
RU24
RU19
RU17
RU13
RU09
RU05
RU01
RV
V-SIZE
R-L-LIN
RUN3
RUJ7
RU53
RU51
RU47
RU45
RU41
RU37
RU33
RU29
BV
B-R-LIN
RH-L-SIZE
RV-CENT
RUK2
RU32
RU30
RU76
RU73
RU69
RU65
RU61
RU57
RH
RUL1
RUQ3
B-L-LIN
BH-L-SIZE
RH-CENT
RUK6
RUE3
RUE1
RUA6
RUA3
RU98
RU94
RU90
RU86
BH
RUL5
RUQ7
GV-CENT
BV-CENT
RUG1
RUF6
RUF2
RUE7
GV
RUN5
RUP4
GH-CENT
BH-CENT
GH-PIN
PHASE
RT26
RUH8
RUH4
RUG9
RUG5
GH
RUN9
RUP8

Fig. 2-17-2

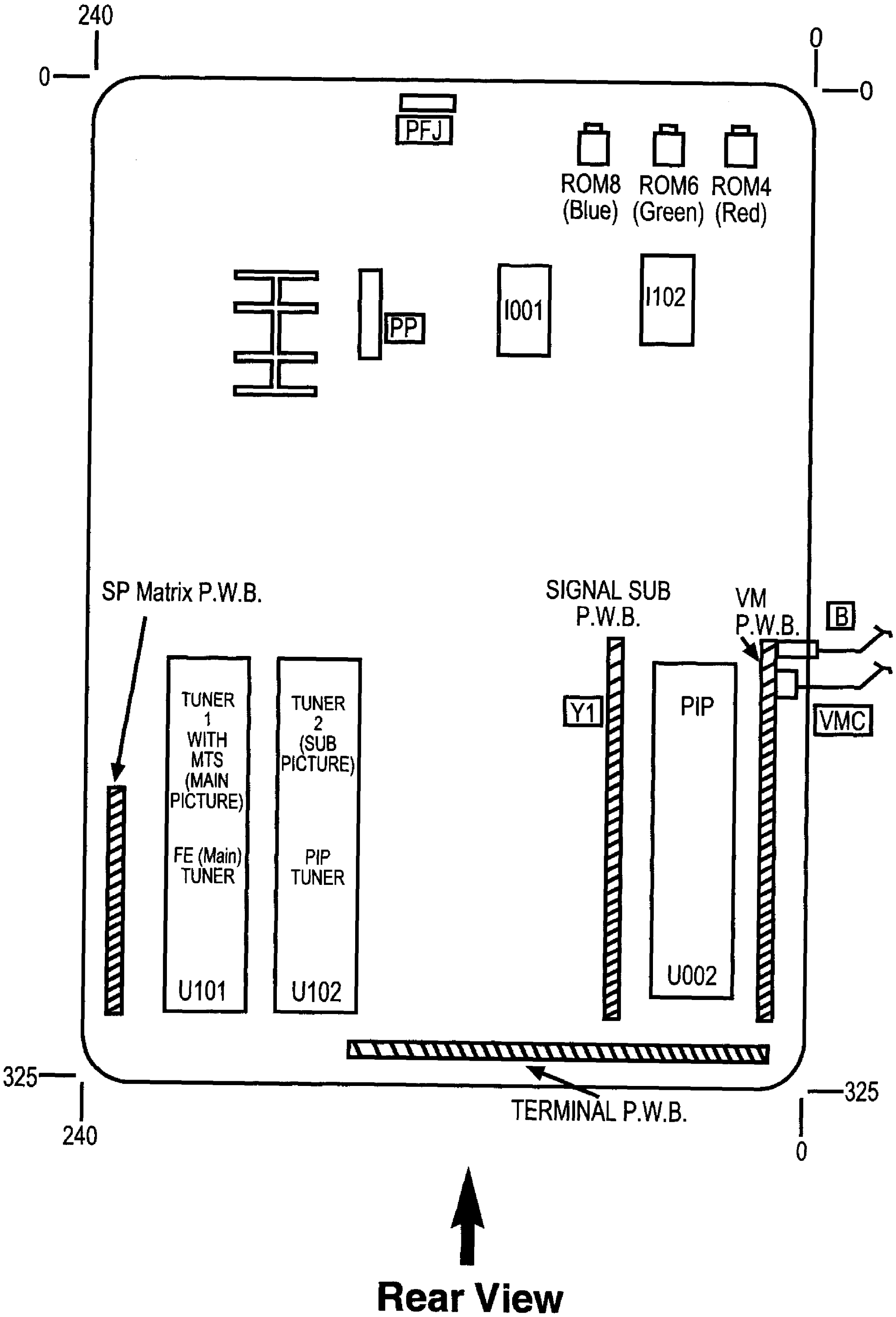
3. ADJUSTMENT POINT

3.1 CRT, cabinet locations

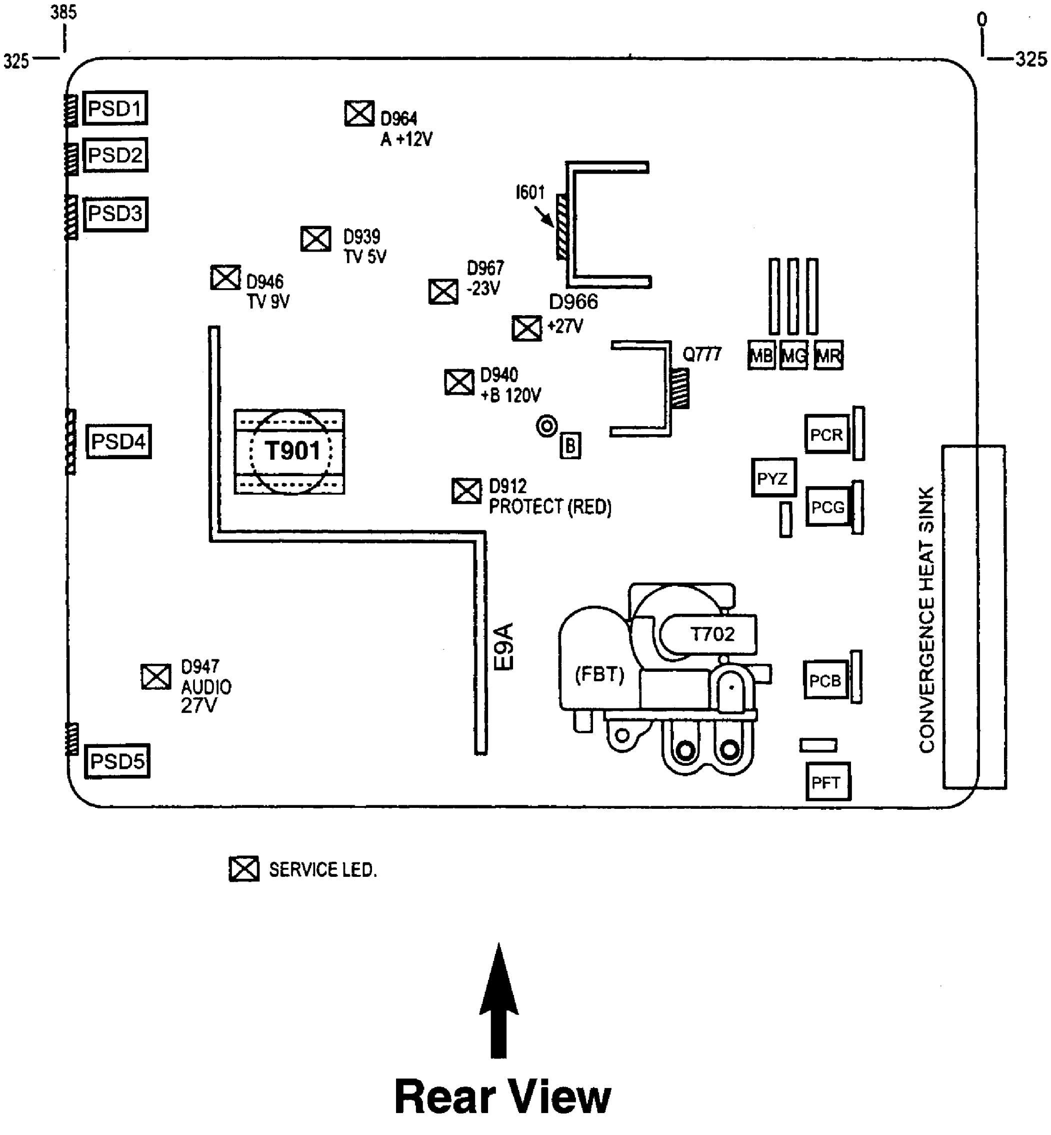


1. CENTERING MAGNET FOR RED PRT
2. CENTERING MAGNET FOR GREEN PRT
3. CENTERING MAGNET FOR BLUE PRT
4. 4-POLE MAGNET FOR BEAM FORM ADJUSTMENT
5. BEAM ALIGNMENT MAGNET
6. ANALOG CONVERGENCE BOARD (On Front Center Board)
7. FOCUS PACK (Top Adjustments for SCREEN, Bottom for FOCUS)

3.2 MAIN CHASSIS
(Signal P.W.B.)

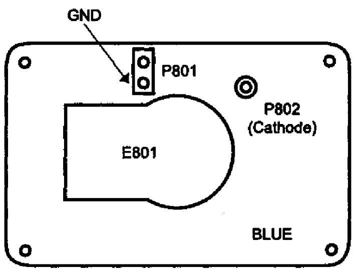

240
0
0
0
PFJ
ROM8 (Blue)
ROM6 (Green)
ROM4 (Red)
PP
I001
I102
SP Matrix P.W.B.
SIGNAL SUB P.W.B.
VM P.W.B.
B
Y1
VMC
TUNER 1 WITH MTS (MAIN PICTURE)
FE (Main) TUNER
U101
TUNER 2 (SUB PICTURE)
PIP TUNER
U102
PIP
U002
TERMINAL P.W.B.
325
240
325
0
Rear View

3.3 MAIN CHASSIS
(Power/Deflection P.W.B.)

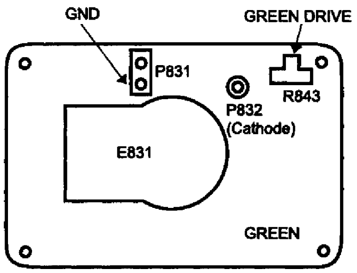

385
325
0
325
PSD1
PSD2
PSD3
PSD4
PSD5
D964
A +12V
I601
D939
TV 5V
D946
TV 9V
D967
-23V
D966
+27V
Q777
MB
MG
MR
D940
+B 120V
B
T901
D912
PROTECT (RED)
PCR
PYZ
PCG
E9A
T702
(FBT)
D947
AUDIO
27V
PCB
PFT
CONVERGENCE HEAT SINK
☒ SERVICE LED.
Rear View

3.3 CPT (R) (G) (B), Focus Pack, Control P.W.B.

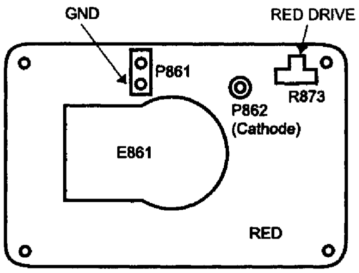
CPT (B)


GND
P801
P802
(Cathode)
E801
BLUE

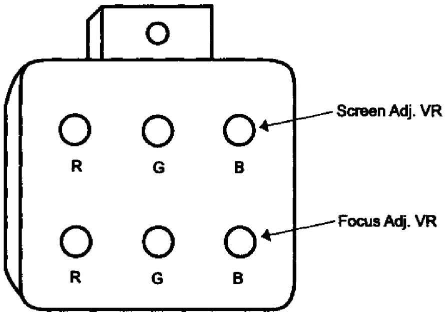
CPT (G)


GND
GREEN DRIVE
P831
R843
P832
(Cathode)
E831
GREEN

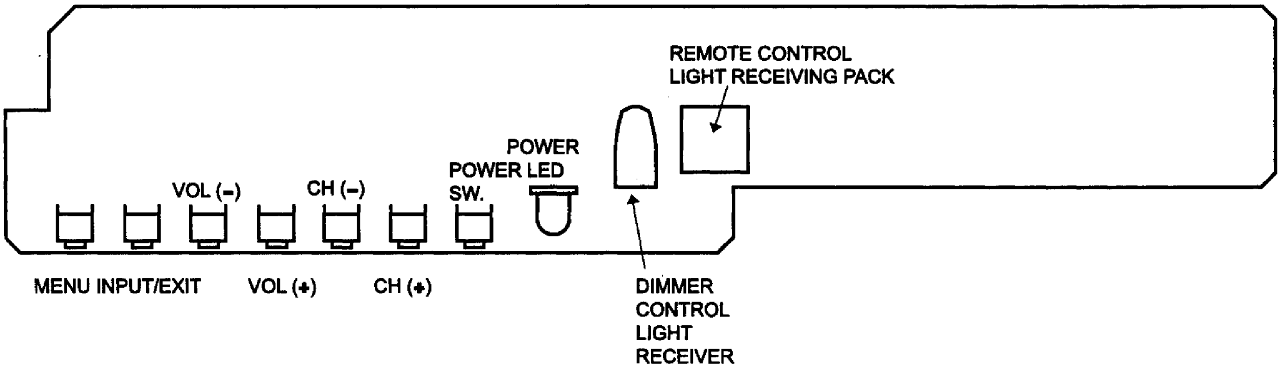
CPT (R)


GND
RED DRIVE
P861
R873
P862
(Cathode)
E861
RED

Focus Pack (UFPK)

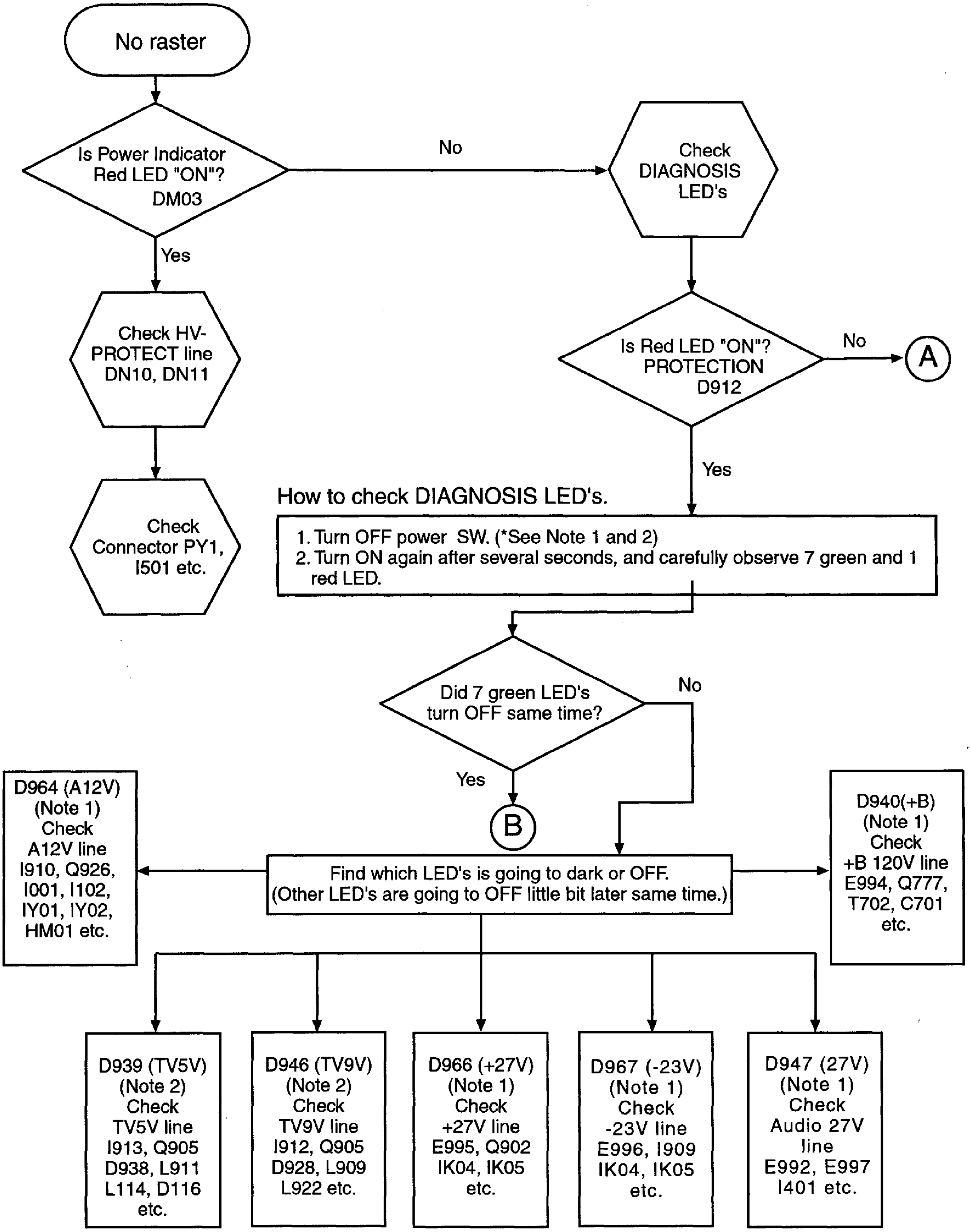

Screen Adj. VR
R
G
B
Focus Adj. VR
R
G
B

Control P.W.B.

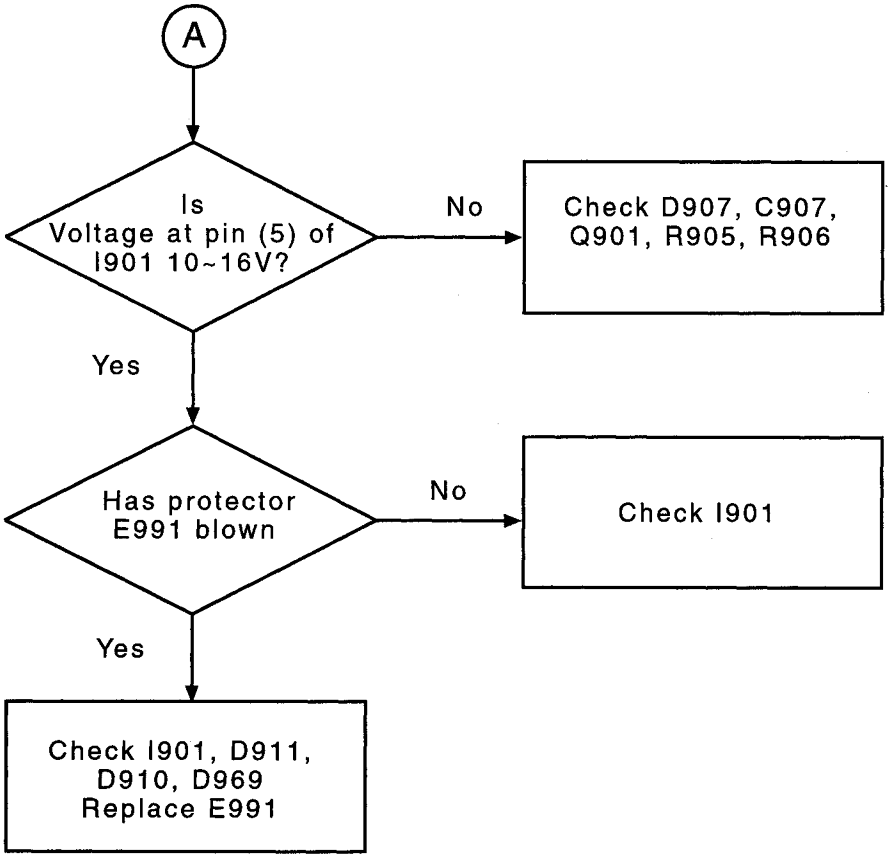

REMOTE CONTROL
LIGHT RECEIVING PACK
POWER
POWER LED
SW.
VOL (–)
CH (–)
MENU
INPUT/EXIT
VOL (+)
CH (+)
DIMMER
CONTROL
LIGHT
RECEIVER

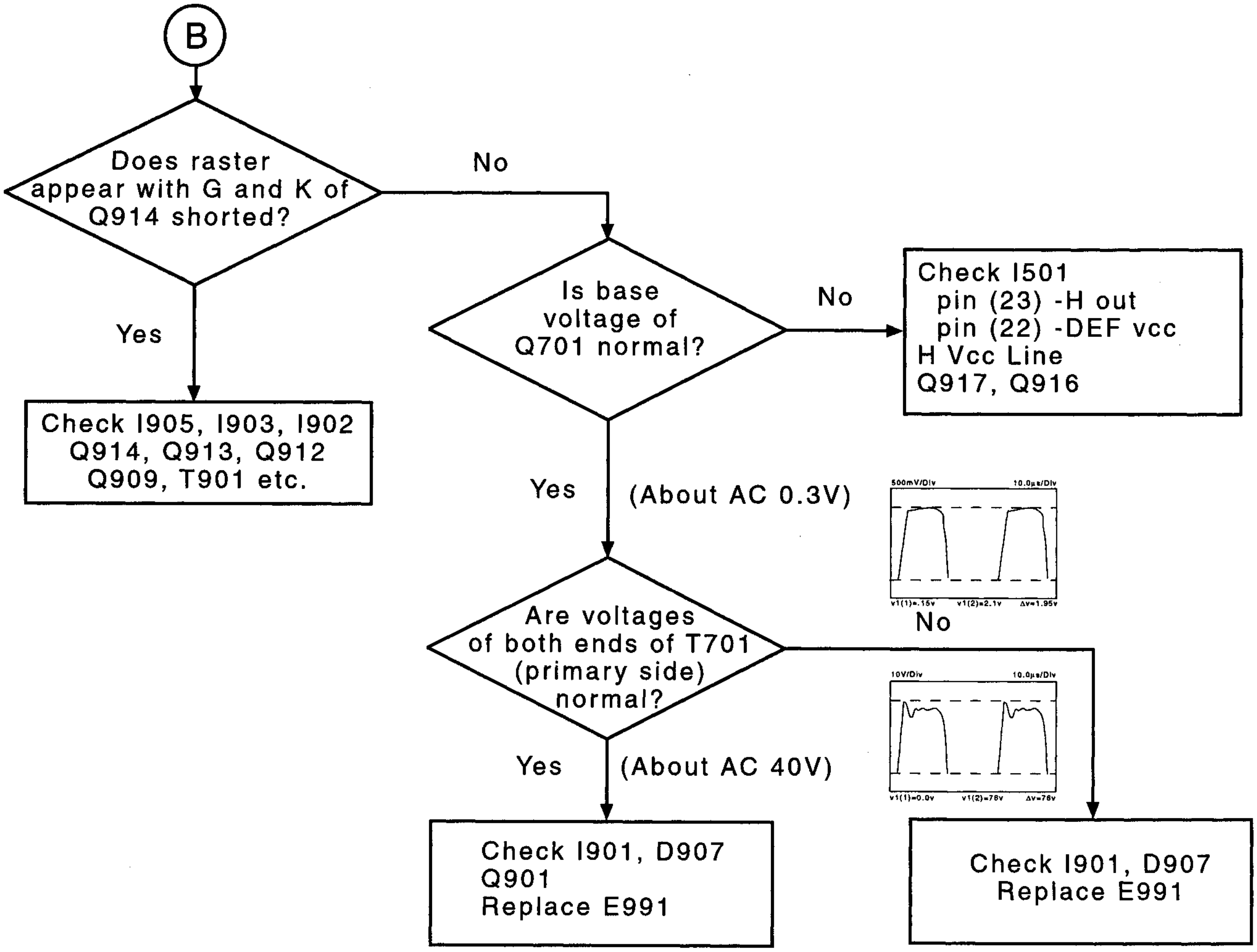
TROUBLESHOOTING

1. No Raster and No Power (REPAIR METHOD)

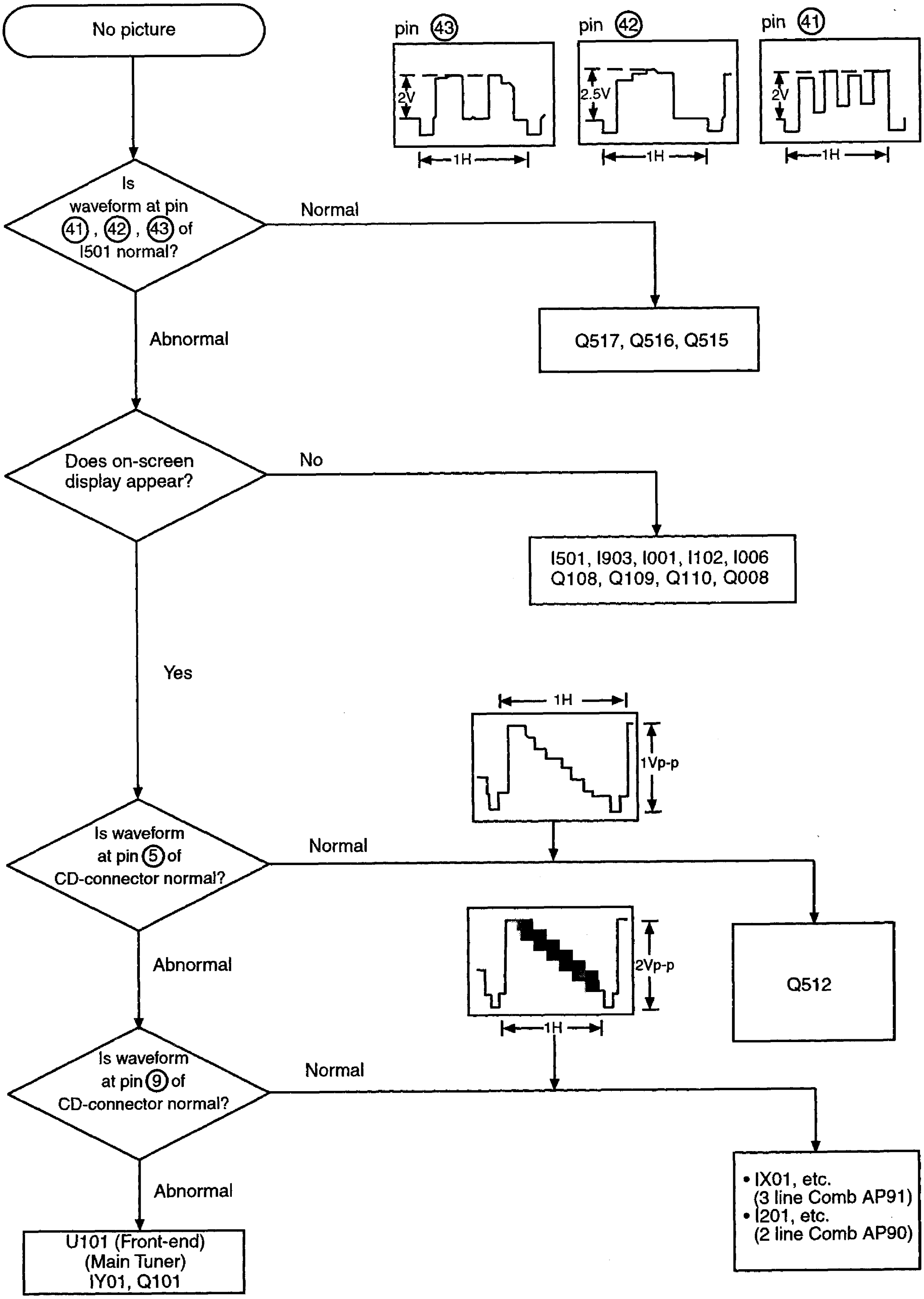

No raster
Is Power Indicator Red LED "ON"? DM03
No
Check DIAGNOSIS LED's
Yes
Check HV-PROTECT line DN10, DN11
Is Red LED "ON"? PROTECTION D912
No
A
Yes
Check Connector PY1, I501 etc.
How to check DIAGNOSIS LED's.
1. Turn OFF power SW. (*See Note 1 and 2)
2. Turn ON again after several seconds, and carefully observe 7 green and 1 red LED.
Did 7 green LED's turn OFF same time?
No
Yes
B
D964 (A12V) (Note 1) Check A12V line I910, Q926, I001, I102, IY01, IY02, HM01 etc.
Find which LED's is going to dark or OFF. (Other LED's are going to OFF little bit later same time.)
D940(+B) (Note 1) Check +B 120V line E994, Q777, T702, C701 etc.
D939 (TV5V) (Note 2) Check TV5V line I913, Q905 D938, L911 L114, D116 etc.
D946 (TV9V) (Note 2) Check TV9V line I912, Q905 D928, L909 L922 etc.
D966 (+27V) (Note 1) Check +27V line E995, Q902 IK04, IK05 etc.
D967 (-23V) (Note 1) Check -23V line E996, I909 IK04, IK05 etc.
D947 (27V) (Note 1) Check Audio 27V line E992, E997 I401 etc.

Note 1 - ALWAYS ON but change BRIGHTNESS at tunner.
Note 2 - This LED is OFF when TV is on STAND BY.


A
Is Voltage at pin (5) of I901 10~16V?
No
Check D907, C907, Q901, R905, R906
Yes
Has protector E991 blown
No
Check I901
Yes
Check I901, D911, D910, D969 Replace E991

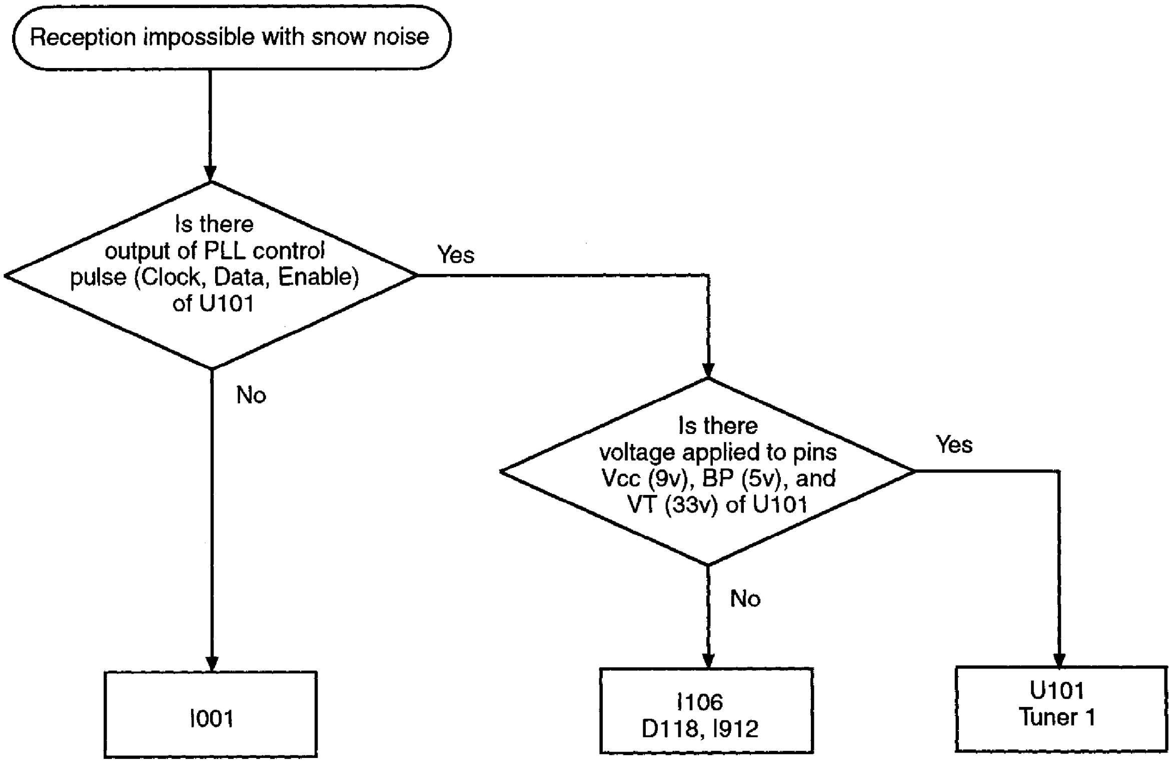

B
Does raster appear with G and K of Q914 shorted?
No
Yes
Check I905, I903, I902 Q914, Q913, Q912 Q909, T901 etc.
Is base voltage of Q701 normal?
No
Check I501 pin (23) -H out pin (22) -DEF vcc H Vcc Line Q917, Q916
Yes
(About AC 0.3V)
500mV/Div
10.0µs/Div
v1(1)=.15v
v1(2)=2.1v
Δv=1.95v
Are voltages of both ends of T701 (primary side) normal?
No
10V/Div
10.0µs/Div
v1(1)=0.0v
v1(2)=76v
Δv=76v
Yes
(About AC 40V)
Check I901, D907 Q901 Replace E991
Check I901, D907 Replace E991

2. No Picture

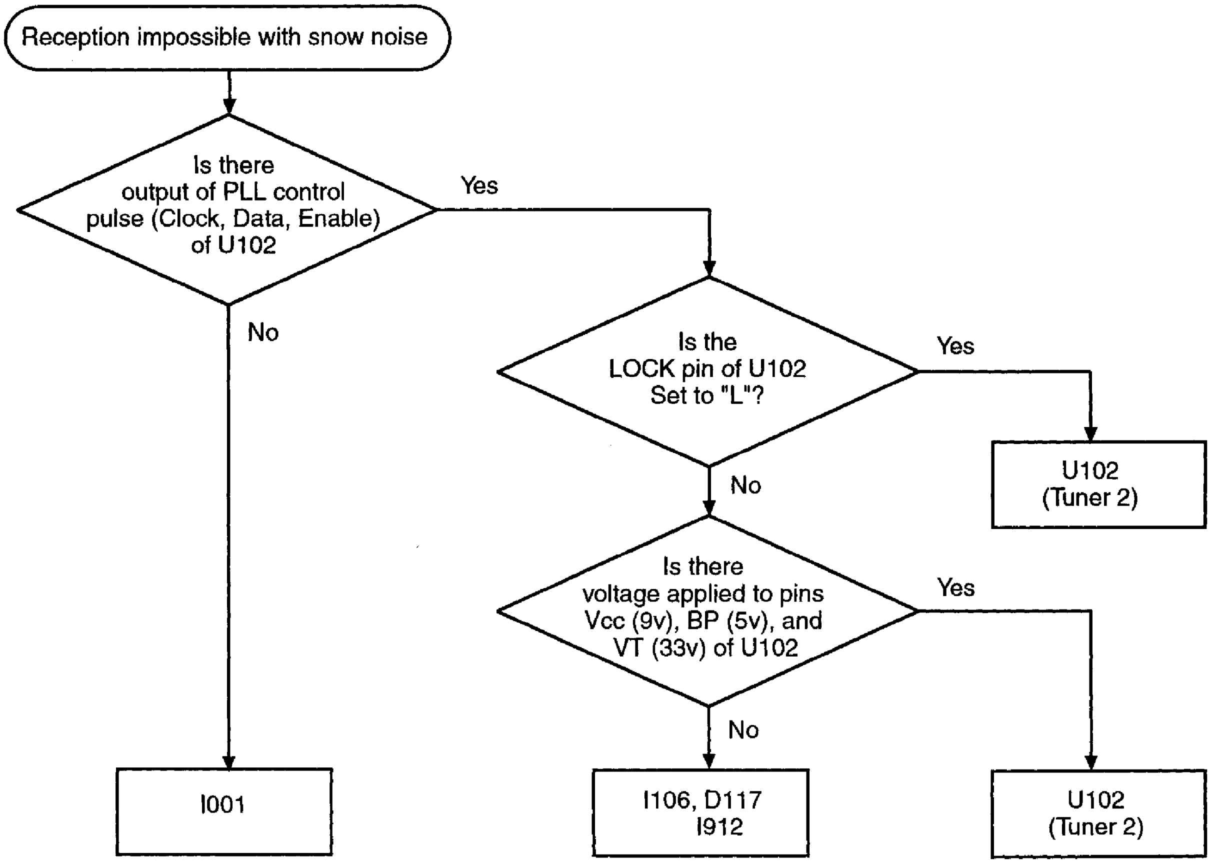

No picture
pin ㊸
2V
1H
pin ㊷
2.5V
1H
pin ㊶
2V
1H
Is waveform at pin ㊶, ㊷, ㊸ of I501 normal?
Normal
Q517, Q516, Q515
Abnormal
Does on-screen display appear?
No
I501, I903, I001, I102, I006
Q108, Q109, Q110, Q008
Yes
1H
1Vp-p
Is waveform at pin ⑤ of CD-connector normal?
Normal
Q512
2Vp-p
1H
Abnormal
Is waveform at pin ⑨ of CD-connector normal?
Normal
• IX01, etc.
(3 line Comb AP91)
• I201, etc.
(2 line Comb AP90)
Abnormal
U101 (Front-end)
(Main Tuner)
IY01, Q101

3. Reception Impossible with Snow Noise

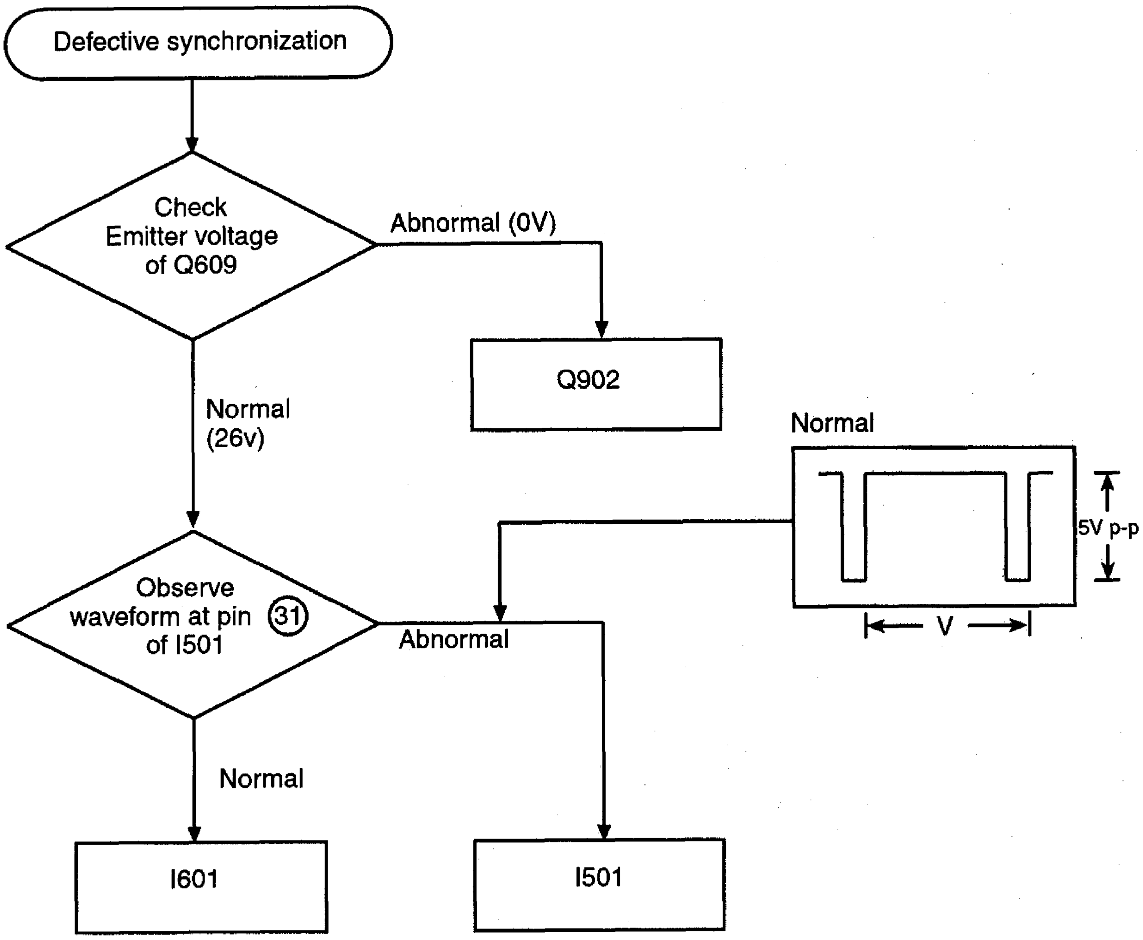
Main Picture


Reception impossible with snow noise
Is there output of PLL control pulse (Clock, Data, Enable) of U101
Yes
No
Is there voltage applied to pins Vcc (9v), BP (5v), and VT (33v) of U101
Yes
No
I001
I106 D118, I912
U101 Tuner 1

Sub Picture (PIP)

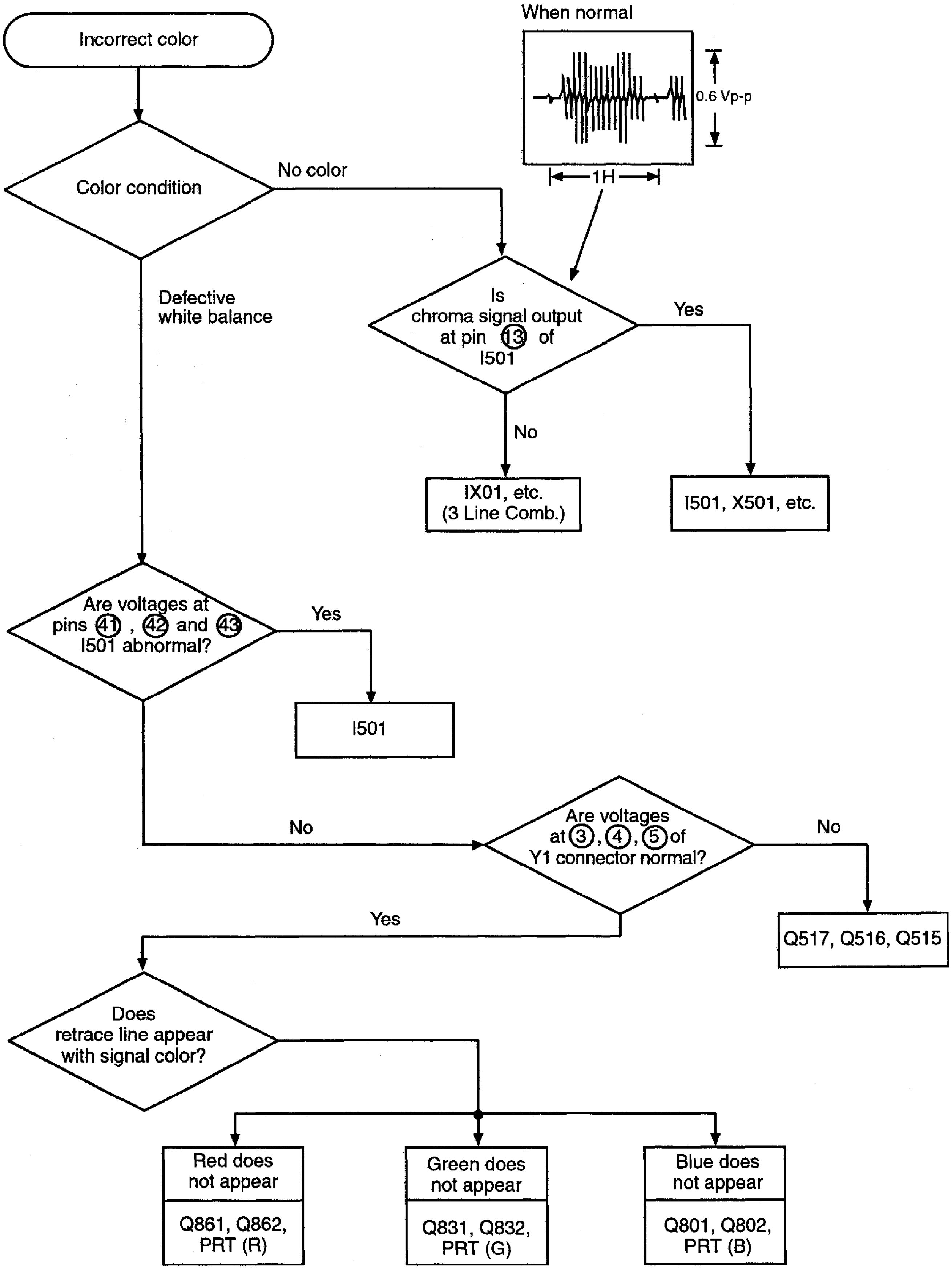

Reception impossible with snow noise
Is there output of PLL control pulse (Clock, Data, Enable) of U102
Yes
No
Is the LOCK pin of U102 Set to "L"?
Yes
No
U102 (Tuner 2)
Is there voltage applied to pins Vcc (9v), BP (5v), and VT (33v) of U102
Yes
No
I001
I106, D117 I912
U102 (Tuner 2)

4. Defective Synchronization

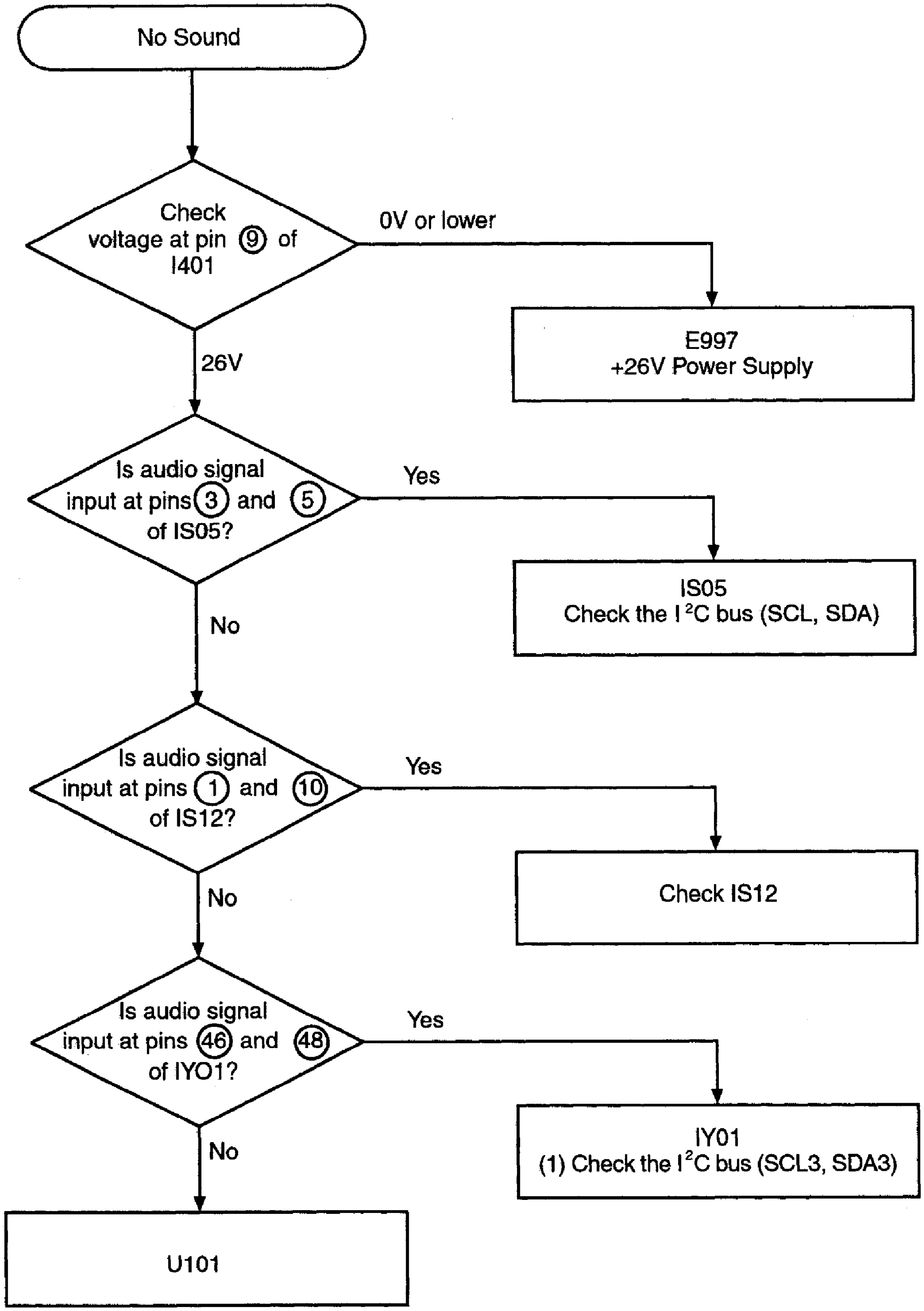


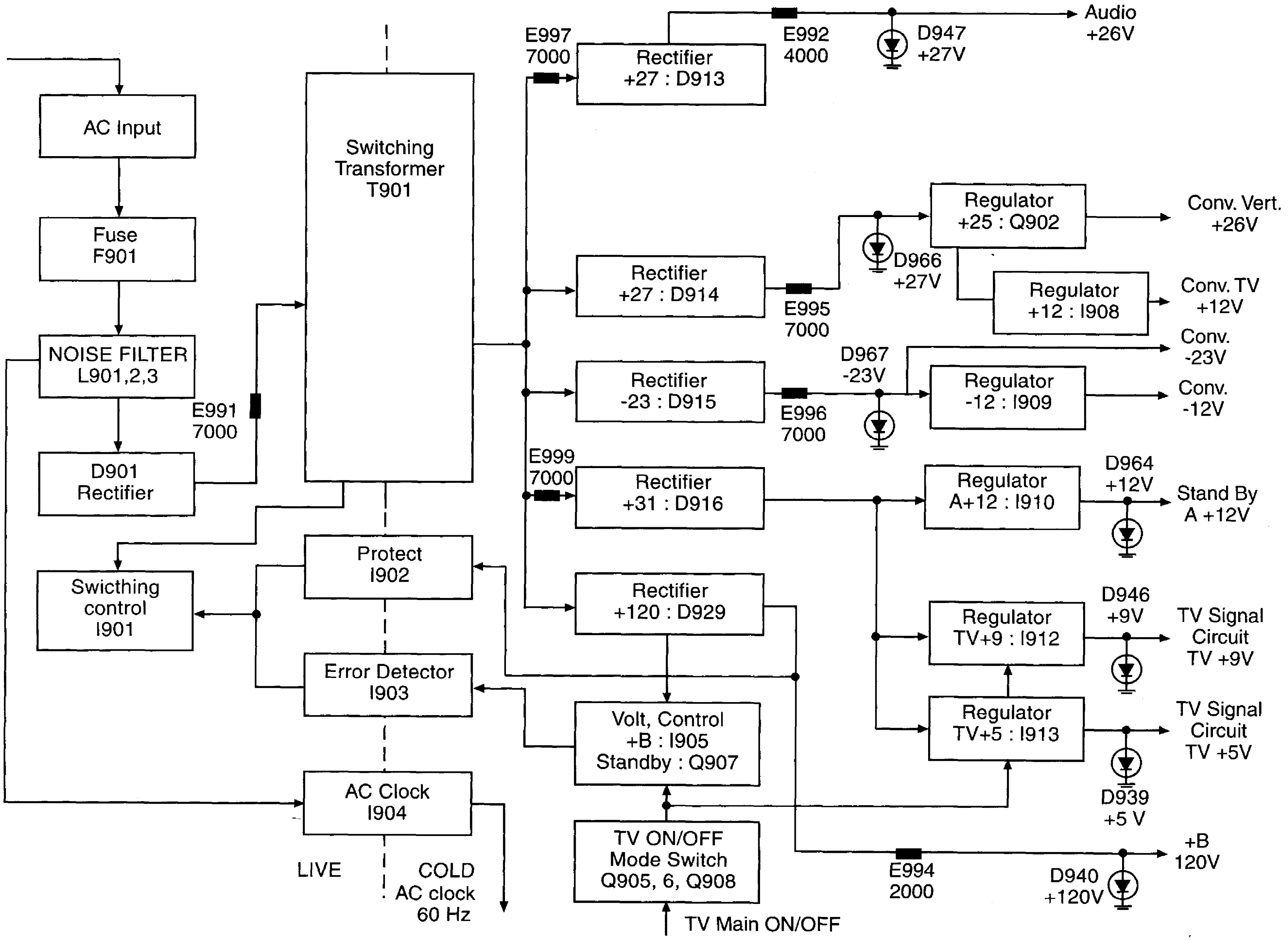
Defective synchronization
Check Emitter voltage of Q609
Abnormal (0V)
Q902
Normal (26v)
Normal
5V p-p
V
Observe waveform at pin ㉛ of I501
Abnormal
Normal
I601
I501

5. Incorrect Color


Incorrect color
Color condition
No color
When normal
0.6 Vp-p
1H
Is chroma signal output at pin ⑬ of I501
Yes
No
IX01, etc. (3 Line Comb.)
I501, X501, etc.
Defective white balance
Are voltages at pins ㊶, ㊷ and ㊸ I501 abnormal?
Yes
I501
No
Are voltages at ③, ④, ⑤ of Y1 connector normal?
No
Q517, Q516, Q515
Yes
Does retrace line appear with signal color?
Red does not appear
Q861, Q862, PRT (R)
Green does not appear
Q831, Q832, PRT (G)
Blue does not appear
Q801, Q802, PRT (B)

6. No Sound


No Sound
Check voltage at pin ⑨ of I401
0V or lower
E997
+26V Power Supply
26V
Is audio signal input at pins ③ and ⑤ of IS05?
Yes
IS05
Check the I²C bus (SCL, SDA)
No
Is audio signal input at pins ① and ⑩ of IS12?
Yes
Check IS12
No
Is audio signal input at pins ㊻ and ㊽ of IYO1?
Yes
IY01
(1) Check the I²C bus (SCL3, SDA3)
No
U101


AC Input
Fuse F901
NOISE FILTER L901,2,3
D901 Rectifier
E991 7000
Switching Transformer T901
Swicthing control I901
Protect I902
Error Detector I903
AC Clock I904
LIVE
COLD
AC clock 60 Hz
E997 7000
Rectifier +27 : D913
E992 4000
D947 +27V
Audio +26V
Rectifier +27 : D914
E995 7000
D966 +27V
Regulator +25 : Q902
Conv. Vert. +26V
Regulator +12 : I908
Conv. TV +12V
Rectifier -23 : D915
E996 7000
D967 -23V
Conv. -23V
Regulator -12 : I909
Conv. -12V
E999 7000
Rectifier +31 : D916
Regulator A+12 : I910
D964 +12V
Stand By A +12V
Rectifier +120 : D929
Regulator TV+9 : I912
D946 +9V
TV Signal Circuit TV +9V
Regulator TV+5 : I913
TV Signal Circuit TV +5V
D939 +5 V
Volt, Control +B : I905 Standby : Q907
TV ON/OFF Mode Switch Q905, 6, Q908
TV Main ON/OFF
E994 2000
D940 +120V
+B 120V

PROTECTION CIRCUIT BLOCK DIAGRAM

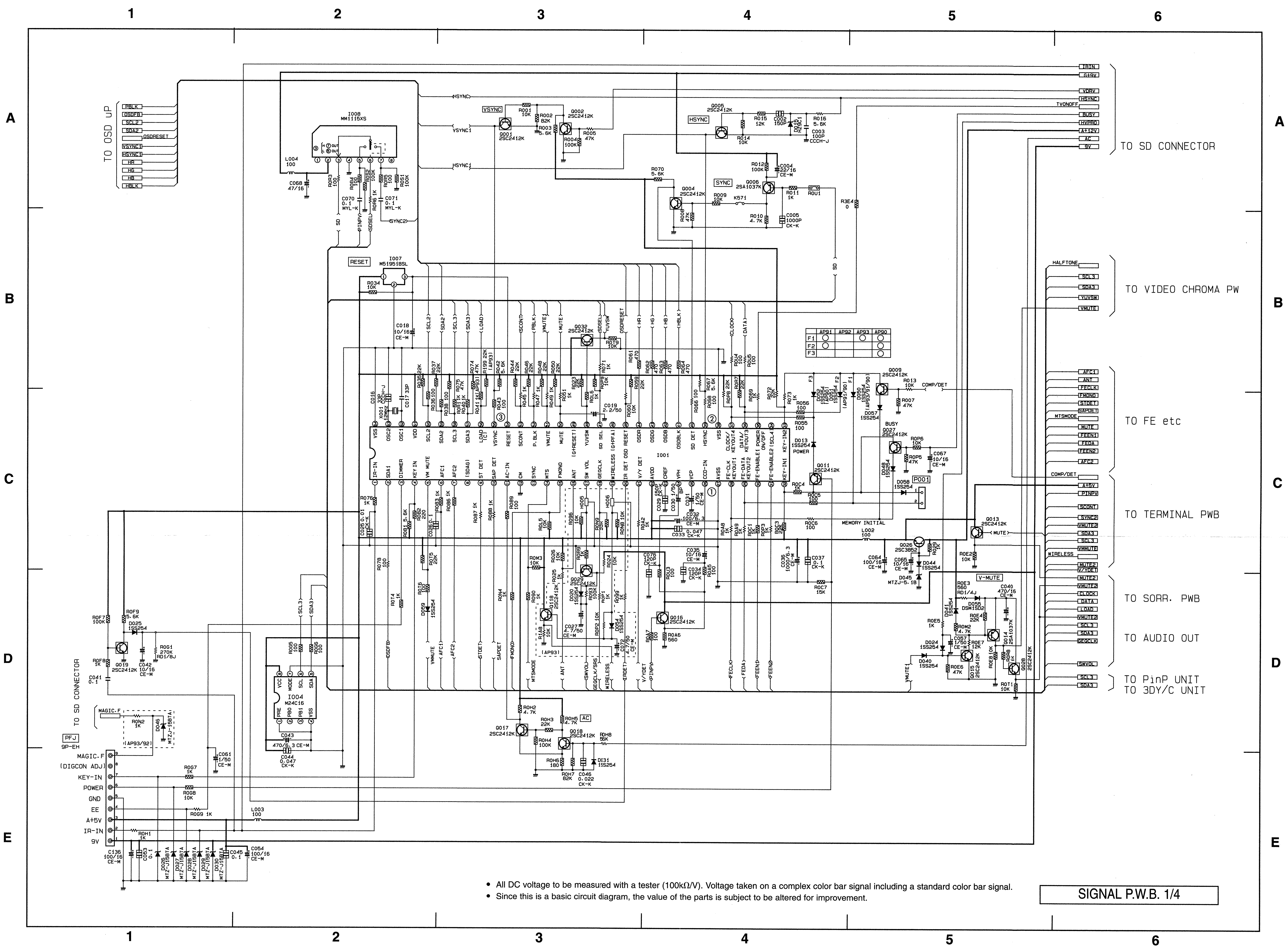
PRODUCT SAFETY NOTE: Components marked with a ⚠ and shaded have special characteristics important to safety. Before replacing any of these components, read carefully the PRODUCT SAFETY NOTICE of this Service Manual. Don't degrade the safety of the receiver through improper servicing.

BASIC CIRCUIT DIAGRAM

Circuit No.	Pin No.	Voltage DC
I001	1	0
	2	0
	3	3
	4	5.2
	5	0
	6	3.5
	7	1.9
	8	0
	9	0
	10	0
	11	2.4
	12	0
	13	2.4
	14	4.8
	15	4.8
	16	5.2
	17	0
	18	0
	19	0
	20	0
	21	0
	22	5.2
	23	0
	24	2.8
	25	1.2
	26	2.2
	27	0
	28	4.9
	29	4.9
	30	0.2
	31	0
	32	5.2
	33	5.1
	34	0
	35	5.1
	37	5.1
	38	0
	39	4.6
	40	4.4
	41	0
	42	0
	43	0
	44	0
	45	0
	46	5.2
	47	3.5
	48	0
	49	0
	50	0
	51	0
	52	0
	53	2.2
	54	2.8
	55	5.0
	56	0
	57	4.9
	58	4.9
	59	5.2
	60	5.2
	61	5.2
	62	2.4
	63	2.3
	64	0
I004	1	0
	2	0
	3	0
	4	0
	5	4.9
	6	4.9
	7	0
	8	5.2

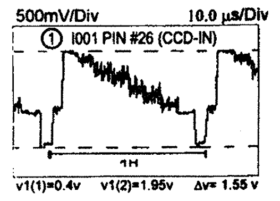
Circuit No.	Pin No.	Voltage DC
I007	1	5.2
	2	0
	3	5.2
I008	1	0
	2	9.3
	3	2.7
	4	0
	5	3.5
	6	2.9
	7	3.4
	8	0

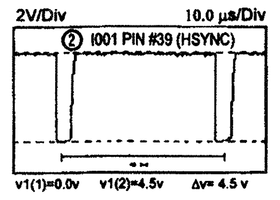
Circuit No.	Pin Name	Voltage DC
Q001	E	0
	B	0
	C	4.9
Q002	E	0.5
	B	0
	C	0.2
Q004	E	0
	B	0.1
	C	4.7
Q005	E	0
	B	0
	C	4.5
Q006	E	2.5
	B	2.6
	C	0.4
Q009	E	0
	B	0
	C	5.3
Q011	E	0
	B	0
	C	5.1
Q013	E	0
	B	0
	C	5.2
Q014	E	11.9
	B	11.7
	C	0
Q015	E	0
	B	0
	C	1.6
Q016	E	4.6
	B	5.2
	C	9.3
Q017	E	0.2
	B	0.6
	C	2.4
Q018	E	0.2
	B	0.4
	C	2.6
Q019	E	0
	B	0.7
	C	0
Q026	E	5.2
	B	5.7
	C	11.8
Q027	E	0
	B	0
	C	5.1
Q028	E	0
	B	0
	C	11.7
Q032	E	0
	B	0
	C	5.3

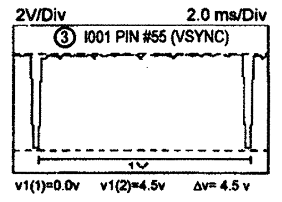

1
2
3
4
5
6
A
B
C
D
E
TO OSD UP
PBLK
OSDFB
SCL2
SDA2
OSDRESET
VSYNC1
HSYNC1
HR
HG
HB
HBLK
I008
MM1115XS
I007
M51951BSL
RESET
I001
I004
M24C16
VSYNC
HSYNC
SYNC
TRIN
G+9V
VDRV
HSYNC
TVONOFF
BUSY
HVPRO
A+12V
AC
9V
TO SD CONNECTOR
HALFTONE
SCL3
SDA3
YUVSW
VMUTE
TO VIDEO CHROMA PW
AFC1
ANT
FECLK
FMONO
STDET
SAPDET
MTSMODE
MUTE
FEEN1
FEDA
FEEN2
AFC2
TO FE etc
COMP/DET
A+5V
PINPV
SCONT
SYNC2
VMUTE2
SDA3
SCL3
VMMUTE
WIRELESS
MUTE2
V/YDET
TO TERMINAL PWB
MUTE2
VMUTE2
CLOCK
DATA
LOAD
VMUTE2
SCL3
SDA3
GEQCLK
TO SORR. PWB
TO AUDIO OUT
SWVOL
SCL3
SDA3
TO PinP UNIT
TO 3DY/C UNIT
MEMORY INITIAL
V-MUTE
TO SD CONNECTOR
PFJ
9P-EH
MAGIC.F
(DIGCON ADJ)
KEY-IN
POWER
GND
EE
A+5V
IR-IN
9V
SIGNAL P.W.B. 1/4

- All DC voltage to be measured with a tester (100kΩ/V). Voltage taken on a complex color bar signal including a standard color bar signal.
- Since this is a basic circuit diagram, the value of the parts is subject to be altered for improvement.

SIGNAL P.W.B. 1/4







BASIC CIRCUIT DIAGRAM

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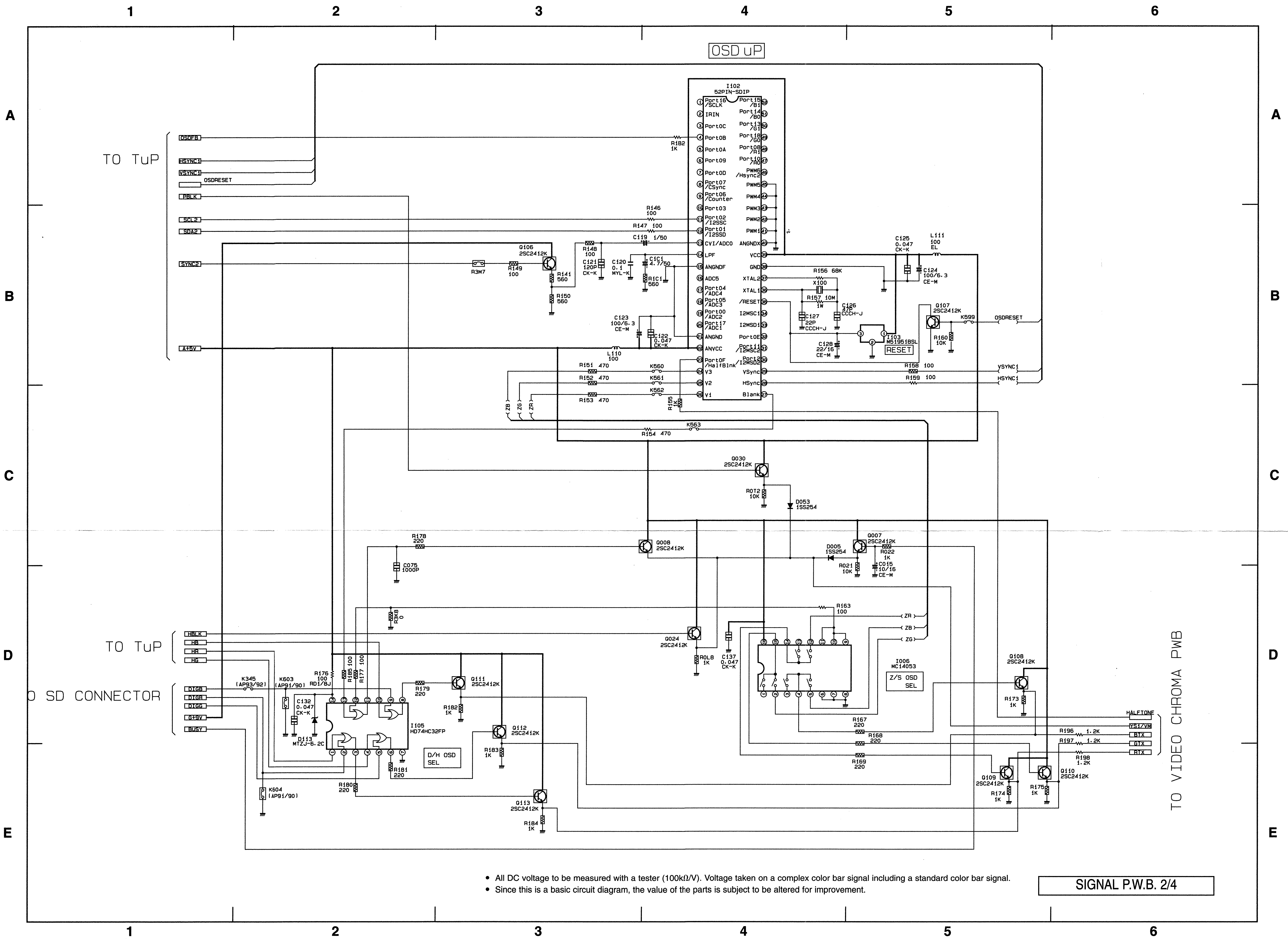
1 2 3 4 5 6
A B C D E
OSD uP
I102
52PIN-SDIP
Port16/SCLK
IRIN
Port0C
Port0B
Port0A
Port09
Port0D
Port07/CSync
Port06/Counter
Port03
Port02/I2SSC
Port01/I2SSD
CVI/ADC0
LPF
ANGNDF
ADC5
Port04/ADC4
Port05/ADC3
Port00/ADC2
Port17/ADC1
ANGND
ANVCC
Port0F/HalfBlnk
V3
V2
V1
Port15/B1
Port14/B0
Port13/G1
Port18/G0
Port08/R1
Port10/R0
PWM6/Hsync2
PWM5
PWM4
PWM3
PWM2
PWM1
ANGNDX
VCC
GND
XTAL2
XTAL1
/RESET
I2MSC1
I2MSD1
Port0E
Port11/I2MSC2
Port12/I2MSD2
VSync
HSync
Blank
TO TuP
OSDFB
HSYNC1
VSYNC1
OSDRESET
PBLK
SCL2
SDA2
SYNC2
A+5V
R182 1K
R146 100
R147 100
C119 1/50
R148 100
Q106 2SC2412K
R3M7
R149 100
R141 560
R150 560
C121 120P CK-K
C120 0.1 MYL-K
C1C1 4.7/50
R1C1 560
C123 100/6.3 CE-M
C122 0.047 CK-K
L110 100
R151 470
R152 470
R153 470
K560
K561
K562
R155 1K
R154 470
K563
ZB ZG ZR
C125 0.047 CK-K
L111 100 EL
C124 100/6.3 CE-M
R156 68K
X100
R157 10M 1W
C127 22P CCCH-J
C126 27P CCCH-J
C128 22/16 CE-M
I103 M51951BSL
RESET
Q107 2SC2412K
K599
R160 10K
OSDRESET
R158 100
R159 100
VSYNC1
HSYNC1
Q030 2SC2412K
R0T2 10K
D053 1SS254
R178 220
C075 1000P
Q008 2SC2412K
D005 1SS254
Q007 2SC2412K
R022 1K
R021 10K
C015 10/16 CE-M
R163 100
ZR ZB ZG
R3K8 0
Q024 2SC2412K
R0L8 1K
C137 0.047 CK-K
I006 MC14053
Z/S OSD SEL
Q108 2SC2412K
R173 1K
TO TuP
HBLK HB HR HG
O SD CONNECTOR
DIGB DIGR DIGG G+9V BUSY
K345 (AP93/92)
K603 (AP91/90)
R176 100
RD1/8J
R185 100
R186 100
R177 100
C132 0.047 CK-K
D113 MTZJ-6.2C
R179 220
Q111 2SC2412K
R182 1K
I105 HD74HC32FP
D/H OSD SEL
Q112 2SC2412K
R183 1K
R181 220
R180 220
K604 (AP91/90)
Q113 2SC2412K
R184 1K
R167 220
R168 220
R169 220
HALFTONE
YS1/YM
BTX
GTX
RTX
R196 1.2K
R197 1.2K
R198 1.2K
Q109 2SC2412K
Q110 2SC2412K
R174 1K
R175 1K
TO VIDEO CHROMA PWB

- All DC voltage to be measured with a tester (100kΩ/V). Voltage taken on a complex color bar signal including a standard color bar signal.
- Since this is a basic circuit diagram, the value of the parts is subject to be altered for improvement.

SIGNAL P.W.B. 2/4

Circuit No.	Pin No.	Voltage DC
I006	1	0
	2	0
	3	0
	4	0
	5	0
	6	0
	7	0
	8	0
	9	0
	10	0
	11	0
	12	0
	13	0
	14	0
	15	0
	16	5.2
I102	1	0
	2	0
	3	0
	4	0
	5	0
	6	0
	7	0
	8	0
	9	0
	10	0
	11	5.2
	12	5.2
	13	2.2
	14	1.2
	15	0
	16	1.8
	17	0
	18	0
	17	0
	18	0
	19	0
	20	0
	21	0
	22	5.2
	23	0
	24	0
	25	0
	26	0
	27	3.2
	28	4.6
	29	5.1
	30	0
	31	0
	32	0
	33	0
	34	0
	35	5.1
	36	1.6
	37	2.2
	38	0
	39	5.1
	40	0
	41	0
	42	0
	43	0
	44	0
	45	0
	46	0
	47	0
	48	0
	49	0
	50	0
	51	0
	52	0

Circuit No.	Pin No.	Voltage DC
I103	1	5.2
	2	0
	3	5.1
I105	1	0
	2	0
	3	0
	4	0
	5	0
	6	0
	7	0
	8	0
	9	0
	10	0
	11	0
	12	0
	13	0
	14	5.2

Circuit No.	Pin Name	Voltage DC
Q007	E	0
	B	0
	C	5.2
Q008	E	0
	B	0
	C	5.2
Q024	E	0
	B	0
	C	5.2
Q030	E	0
	B	0
	C	5.2
Q106	E	4.6
	B	5.2
	C	9.3
Q107	E	0
	B	0
	C	5.1
Q108	E	0
	B	0
	C	5.2
Q110	E	0
	B	0
	C	5.2
Q111	E	0
	B	0
	C	5.2
Q112	E	0
	B	0
	C	5.2
Q113	E	0
	B	0
	C	5.2

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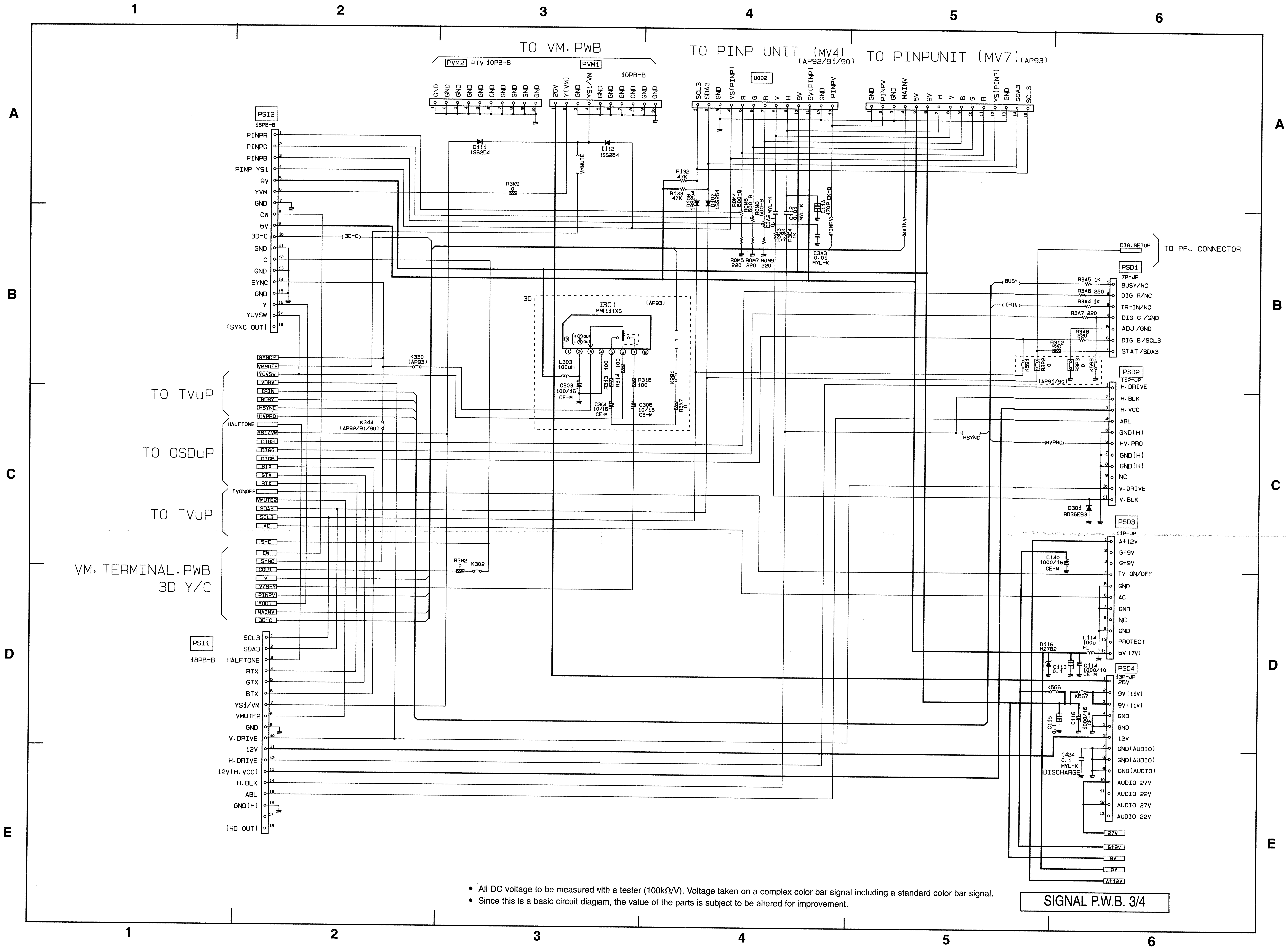
BASIC CIRCUIT DIAGRAM


1
2
3
4
5
6
A
B
C
D
E
TO VM. PWB
PVM2 PTV 10PB-B
PVM1
10PB-B
TO PINP UNIT (MV4) (AP92/91/90)
U002
TO PINPUNIT (MV7) (AP93)
PSI2
18PB-B
PINPR
PINPG
PINPB
PINP YS1
9V
YVM
GND
CW
5V
3D-C
GND
C
GND
SYNC
GND
Y
YUVSW
(SYNC OUT)
D111
1SS264
D112
1SS264
VMMUTE
R3K9
R132
47K
R133
47K
I301
MM1111XS
(AP93)
L303
100uH
C303
100/16
CE-M
C304
10/16
CE-M
C305
10/16
CE-M
R313 100
R314 100
R315 100
K330
(AP93)
K344
(AP92/91/90)
TO TVuP
TO OSDuP
TO TVuP
VM. TERMINAL. PWB
3D Y/C
HALFTONE
TVONOFF
R3H2
0
K302
PSI1
18PB-B
SCL3
SDA3
HALFTONE
RTX
GTX
BTX
YS1/VM
VMUTE2
GND
V. DRIVE
12V
H. DRIVE
12V(H. VCC)
H. BLK
ABL
GND(H)
(HD OUT)
DIG. SETUP
TO PFJ CONNECTOR
PSD1
7P-JP
BUSY/NC
DIG R/NC
IR-IN/NC
DIG G /GND
ADJ /GND
DIG B/SCL3
STAT /SDA3
PSD2
11P-JP
H. DRIVE
H. BLK
H. VCC
ABL
GND(H)
HV. PRO
GND(H)
GND(H)
NC
V. DRIVE
V. BLK
D301
RD36EB3
PSD3
11P-JP
A+12V
G+9V
G+9V
TV ON/OFF
GND
AC
GND
NC
GND
PROTECT
5V (7V)
C140
1000/16
CE-M
L114
100u
FL
D116
HZ7B2
C113
0.1
C114
1000/10
CE-M
PSD4
13P-JP
26V
9V(11V)
9V(11V)
GND
GND
12V
GND(AUDIO)
GND(AUDIO)
GND(AUDIO)
AUDIO 27V
AUDIO 22V
AUDIO 27V
AUDIO 22V
K566
K567
C424
0.1
MYL-K
DISCHARGE
27V
G+9V
9V
5V
A+12V

- All DC voltage to be measured with a tester (100kΩ/V). Voltage taken on a complex color bar signal including a standard color bar signal.
- Since this is a basic circuit diagam, the value of the parts is subject to be altered for improvement.

SIGNAL P.W.B. 3/4

BASIC CIRCUIT DIAGRAM

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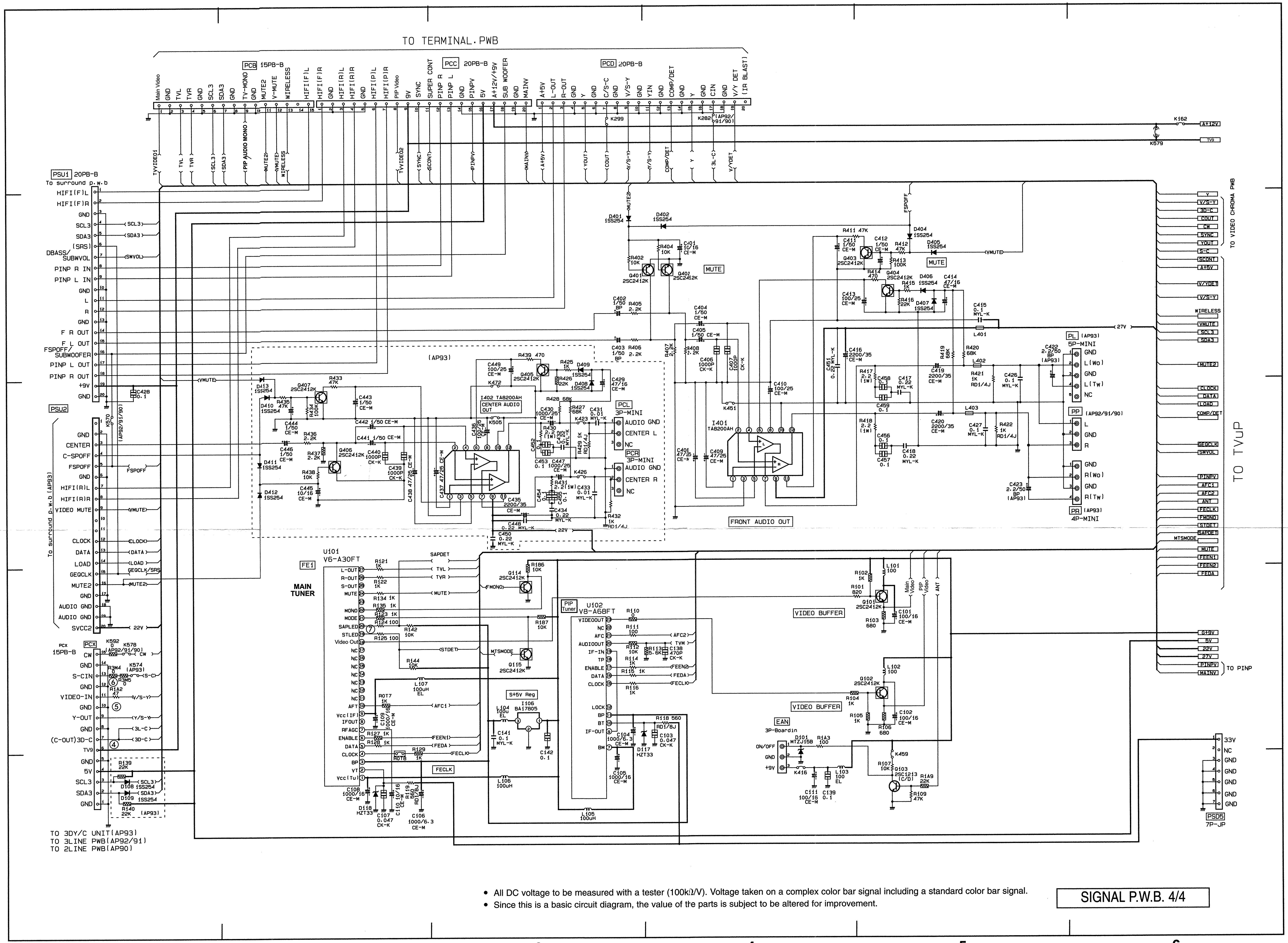
1
2
3
4
5
6
A
B
C
D
E
TO TERMINAL.PWB
PCB 15PB-B
PCC 20PB-B
PCD 20PB-B
PSU1 20PB-B
To surround p.w.b
PSU2
To surround p.w.b (AP93)
PCX 15PB-B
(AP93)
I402 TA8200AH CENTER AUDIO OUT
PCL 3P-MINI
PCR 3P-MINI
I401 TA8200AH
FRONT AUDIO OUT
MUTE
PL (AP93) 5P-MINI
PP (AP92/91/90)
PR (AP93) 4P-MINI
TO VIDEO CHROMA PWB
TO TVuP
U101 V6-A30FT
FE1
MAIN TUNER
U102 V8-A6BFT
PIP Tuner
I106 BA17805
5+5V Reg
VIDEO BUFFER
EAN 3P-Boardin
TO PINP
PSD5 7P-JP
TO 3DY/C UNIT(AP93)
TO 3LINE PWB(AP92/91)
TO 2LINE PWB(AP90)

- All DC voltage to be measured with a tester (100kΩ/V). Voltage taken on a complex color bar signal including a standard color bar signal.
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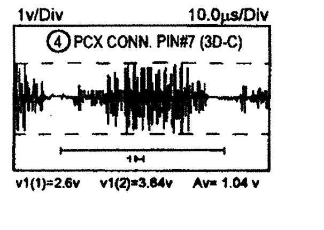
SIGNAL P.W.B. 4/4

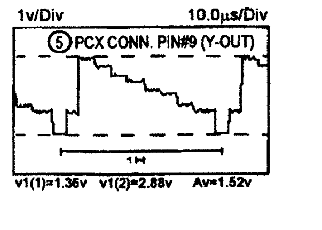
Circuit No.	Pin No.	Voltage DC
I106	1	9.3
	2	0
	3	5.1

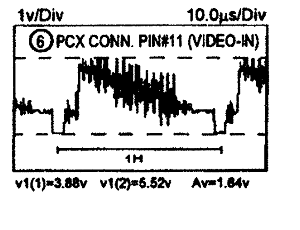
Circuit No.	Pin No.	Voltage DC
I401	1	1.5
	2	0
	3	0
	4	0
	5	1.5
	6	9.3
	7	12.9
	8	5.2
	9	27.5
	10	0
	11	4.4
	12	12.5

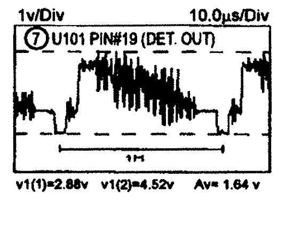
Circuit No.	Pin Name	Voltage DC
Q101	E	6.4
	B	7.1
	C	9.2
Q102	E	1.7
	B	2.3
	C	9.2
Q103	E	0
	B	0.6
	C	0
Q114	E	0
	B	0.7
	C	0
Q115	E	0
	B	0.7
	C	0

Circuit No.	Pin Name	Voltage DC
Q401	E	0
	B	0
	C	0
Q402	E	0
	B	0
	C	0
Q403	E	0
	B	0
	C	4.3
Q404	E	0
	B	0
	C	9.33









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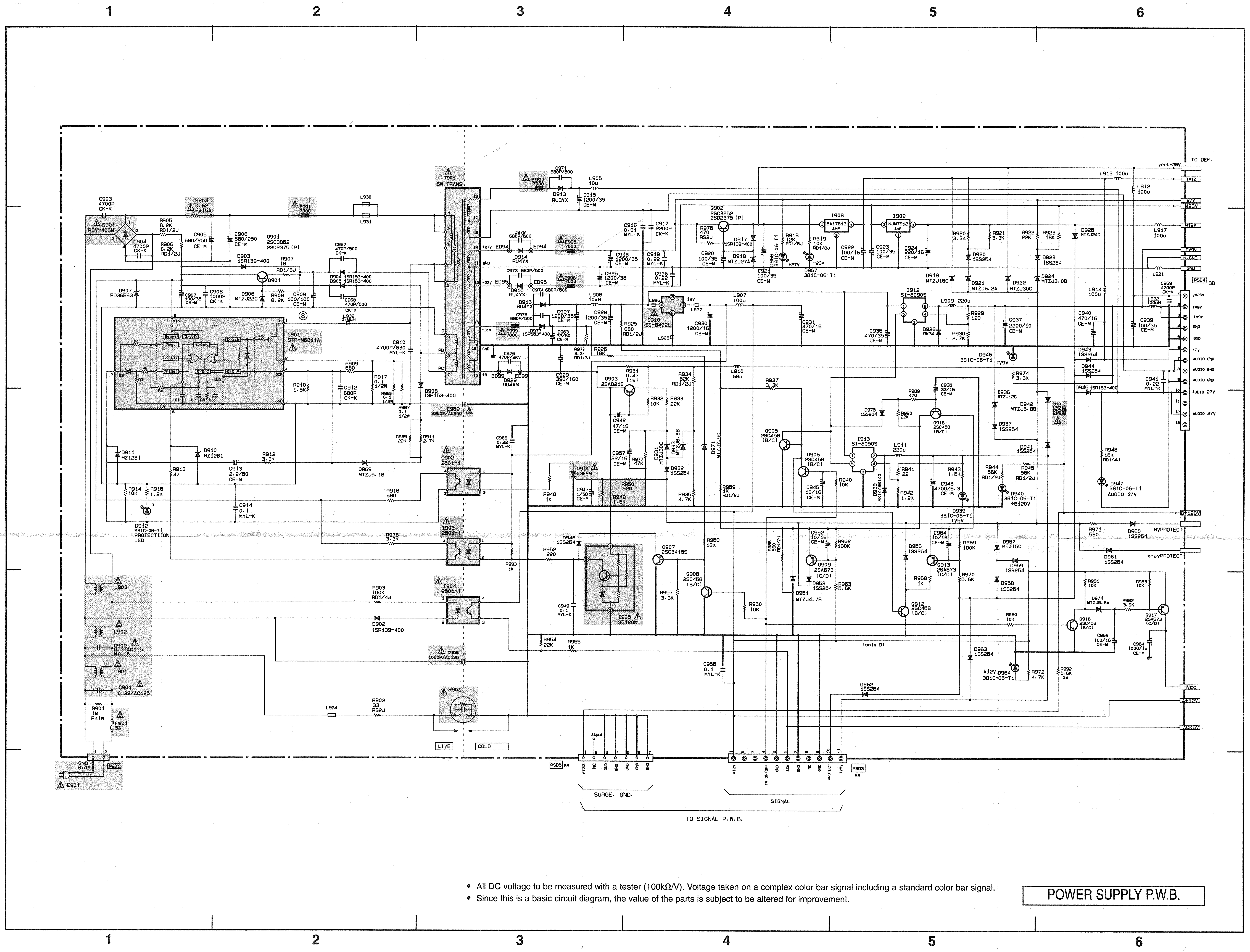
BASIC CIRCUIT DIAGRAM

Circuit No.	Pin No.	Voltage DC	Circuit No.	Pin Name	Voltage DC
I901	1	155.4	Q901	E	24.2
	2	0		B	22.0
	3	0		C	51.5
	4	1.6	Q902	E	25.1
	5	24.2		B	25.7
	6	0.2		C	27.5
	7	2.0	Q903	E	119.1
I902	1	12.0		B	118.5
	2	11.3		C	0.9
	3	1.9	Q905	E	0
	4	24.2		B	0
I903	1	12.0		C	2.5
	2	11.0	Q906	E	0
	3	0		B	0.7
	4	23.4		C	0
I904	1	8.0	Q907	E	0
	2	8.4		B	0
	3	4.6		C	10.8
	4	11.8	Q908	E	0
I905	1	119.0		B	0.7
	2	10.9		C	0
	3	0	Q909	E	4.6
I908	1	25.1		B	10.5
	2	0		C	0
	3	25.2	Q912	E	0
I909	1	0		B	0
	2	-22.7		C	0
	3	-12.2	Q913	E	2.6
I910	1	12.0		B	2.6
	2	0		C	0
	3	12.2	Q914	G	0
	4	31.2		A	11.3
I912	1	31.2		K	0
	2	9.7	Q916	E	0
	3	0		B	0.7
	4	9.1		C	0
	5	2.5	Q917	E	11.9
I913	1	31.2		B	11.1
	2	5.2		C	11.8
	3	0	Q918	E	2.6
	4	5.1		B	3.0
	5	2.5		C	4.6


1
2
3
4
5
6
A
B
C
D
E
T901 SW TRANS
I901 STR-M6811A
D901 RBV-406M
C903 4700P CK-K
R904 0.62 RW15A
E981 7000
L930
L931
Q901 2SC3852 2SD2375 (P)
Q902 2SC3852 2SD2376 (P)
Q903 2SA821S
I902 2501-1
I903 2501-1
I904 2501-1
I905 SE120N
I908 BA17812
I909 NJM7912
I910 SI-8402L
I912 SI-8090S
I913 SI-8050S
L903
L902
L901
C902 0.47/AC125
C901 0.22/AC125
R901 1M RK1M
F901 5A
H901
L924
R902 33 RS2J
D912 SB1C-06-T1 PROTECTION LED
C958 1000P/AC125
C959 2200P/AC250
LIVE
COLD
GND Side
P901
E901
PS05 BB
PS03 BB
PS04 BB
TO DEF.
vert26V
SURGE. GND.
SIGNAL
TO SIGNAL P.W.B.
HVPROTECT
xrayPROTECT
A12V
(only D)

- All DC voltage to be measured with a tester (100kΩ/V). Voltage taken on a complex color bar signal including a standard color bar signal.
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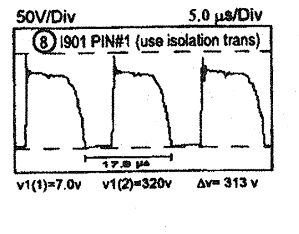
POWER SUPPLY P.W.B.



BASIC CIRCUIT DIAGRAM

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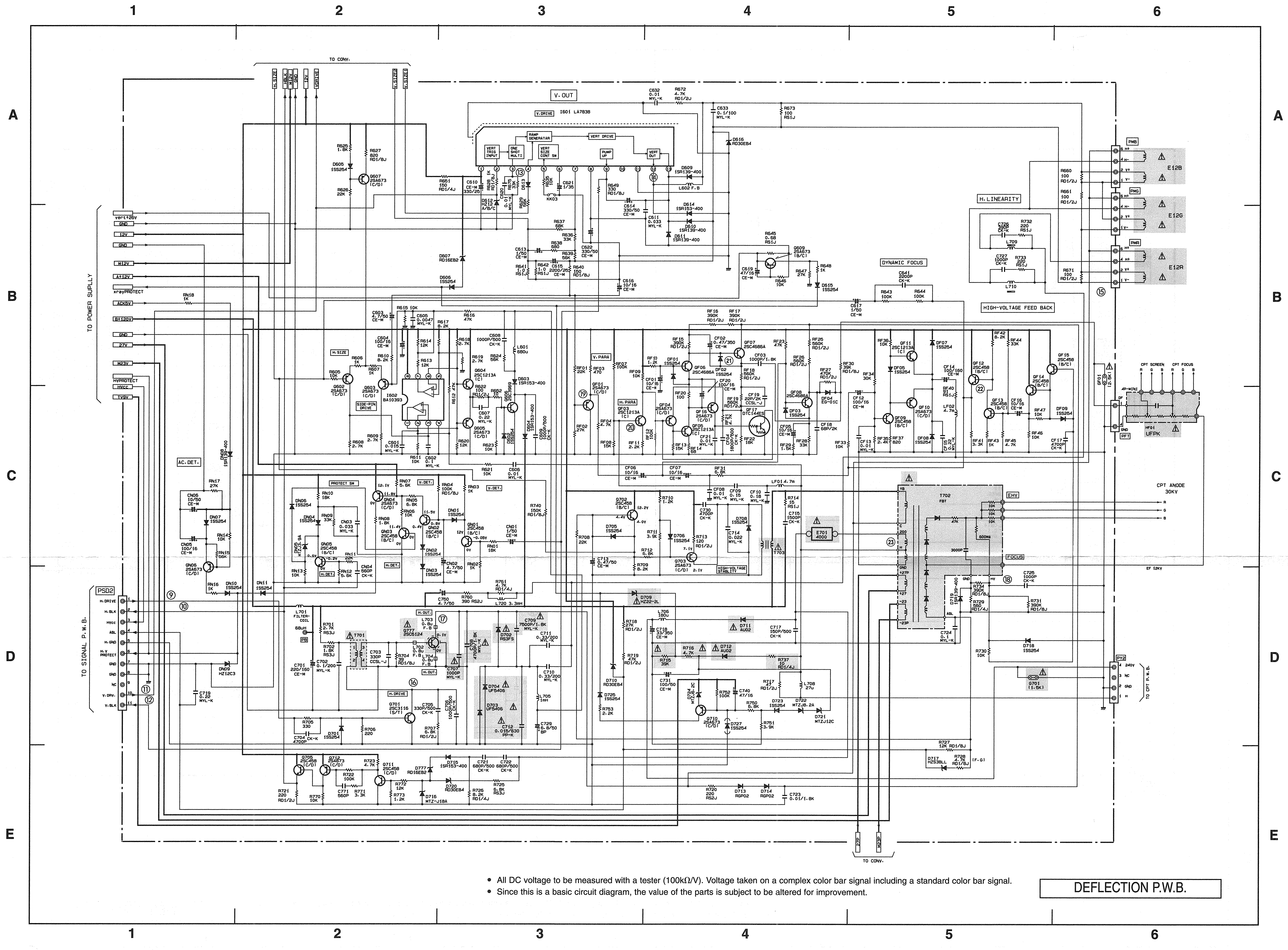
1
2
3
4
5
6
A
B
C
D
E
TO CONV.
V.OUT
V.DRIVE
I601 LA7838
RAMP GENERATOR
VERT DRIVE
VERT TRIG INPUT
ONE SHOT MULTI
VERT SIZE CONT SW
PUMP UP
VERT OUT
TO POWER SUPPLY
TO SIGNAL P.W.B.
PSD2
H.DRIVE
H.BLK
HVCC
ABL
H.GND
H.V PROTECT
GND
NC
V.DRV.
V.BLK
H.SIZE
SIDE-PIN DRIVE
I602 BA10393
V.PARA
H.PARA
AC.DET.
PROTECT SW
H.DET.
H.OUT
H.DRIVE
DYNAMIC FOCUS
H.LINEARITY
HIGH-VOLTAGE FEED BACK
HIGH-VOLTAGE STABLITY
PMB
PMG
PMR
E12B
E12G
E12R
PF7
UFPK
CPT SCREEN
CPT FOCUS
CPT ANODE 30KV
T702 FBT
EHV
FOCUS
EF 52KV
PY2
TO CPT P.W.B.
E701
T701
T703
(9)
(10)
(11)
(12)
(13)
(14)
(15)
(16)
(17)
(18)
(19)
(20)
(21)
(22)
(23)

- All DC voltage to be measured with a tester (100kΩ/V). Voltage taken on a complex color bar signal including a standard color bar signal.
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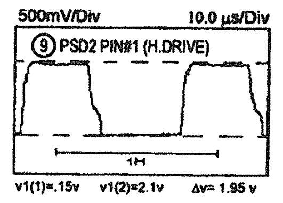
DEFLECTION P.W.B.

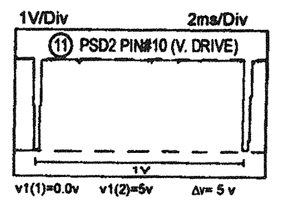
Circuit No.	Pin Name	Voltage DC
Q712	E	12.0
	B	17.0
	C	2.0
Q777	E	0
	B	0
	C	119.0
QF01	E	8.1
	B	7.5
	C	0
QF03	E	0.9
	B	1.5
	C	6.9
QF04	E	7.3
	B	6.9
	C	0.7
QF05	E	0.1
	B	0.7
	C	11.4
QF06	E	11.1
	B	12.1
	C	432.1
QF07	E	552.2
	B	448.5
	C	1096
QF08	E	11.1
	B	11.4
	C	638.5
QF09	E	0.2
	B	0.9
	C	7.9
QF10	E	8.2
	B	7.9
	C	0
QF11	E	8.2
	B	8.4
	C	11.7

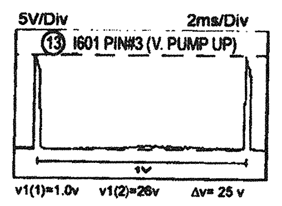
Circuit No.	Pin Name	Voltage DC
QF12	E	4.2
	B	4.8
	C	11.7
QF13	E	0.8
	B	1.4
	C	4.8
QF14	E	8.8
	B	9.4
	C	11.7
QF15	E	9.4
	B	9.7
	C	11.7
QF16	E	11.6
	B	11.4
	C	0
QF17	E	0
	B	0
	C	6.9
QN01	E	0
	B	0
	C	11.8
QN02	E	0.5
	B	0.9
	C	11.8
QN03	E	0
	B	0.4
	C	11.8
QN04	E	11.8
	B	11.8
	C	0
QN05	E	0
	B	0
	C	0.6
QN06	E	9.1
	B	9.1
	C	0

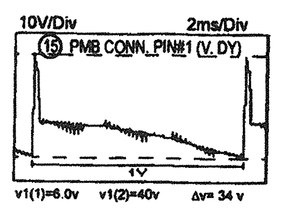
Circuit No.	Pin No.	Voltage DC
I601	1	11.3
	2	4.8
	3	5.4
	4	5.6
	5	0
	6	5.1
	7	5.5
	8	25.0
	9	1.6
	10	1.3
	11	0
	12	12.8
	13	24.7
I602	1	4.8
	2	2.1
	3	2.2
	4	0
	5	2.9
	6	4.8
	7	2.4
	8	11.7

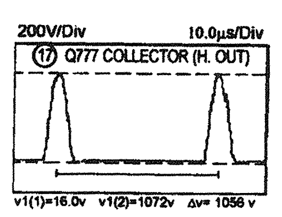
Circuit No.	Pin Name	Voltage DC
Q602	E	5.4
	B	4.8
	C	2.1
Q603	E	5.9
	B	5.3
	C	0.5
Q604	E	4.6
	B	4.8
	C	11.7
Q605	E	4.6
	B	4.8
	C	0
Q606	E	0
	B	0
	C	48.7
Q607	E	11.2
	B	10.3
	C	6.1
Q609	E	25.1
	B	24.8
	C	0
Q701	E	0
	B	0.4
	C	27.8
Q702	E	3.4
	B	3.1
	C	11.7
Q703	E	9.2
	B	8.6
	C	1.7
Q705	E	1.8
	B	2.0
	C	12.0
Q710	E	4.7
	B	5.0
	C	0
Q711	E	0
	B	0.0
	C	10.0

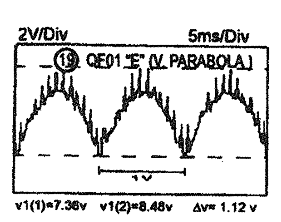


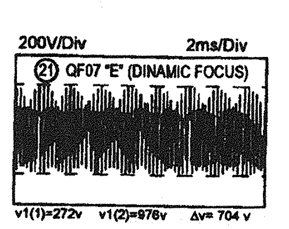


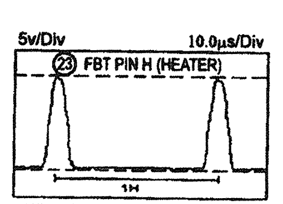


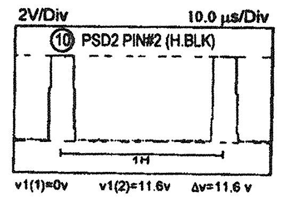


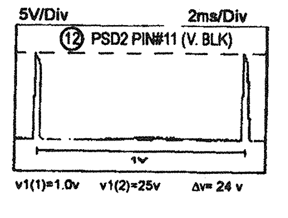


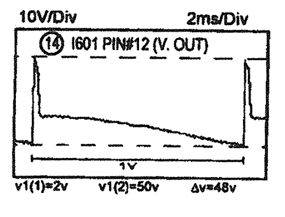


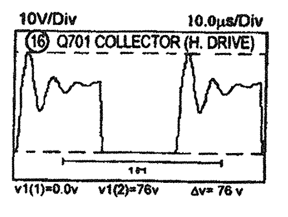


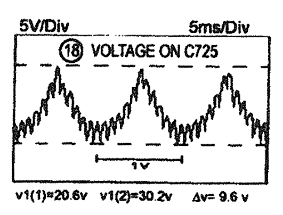


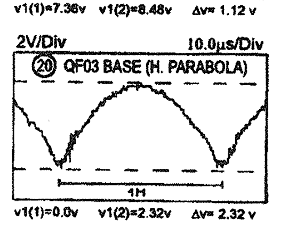


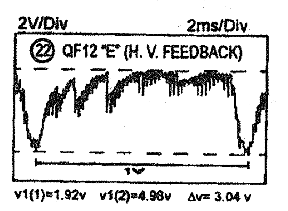












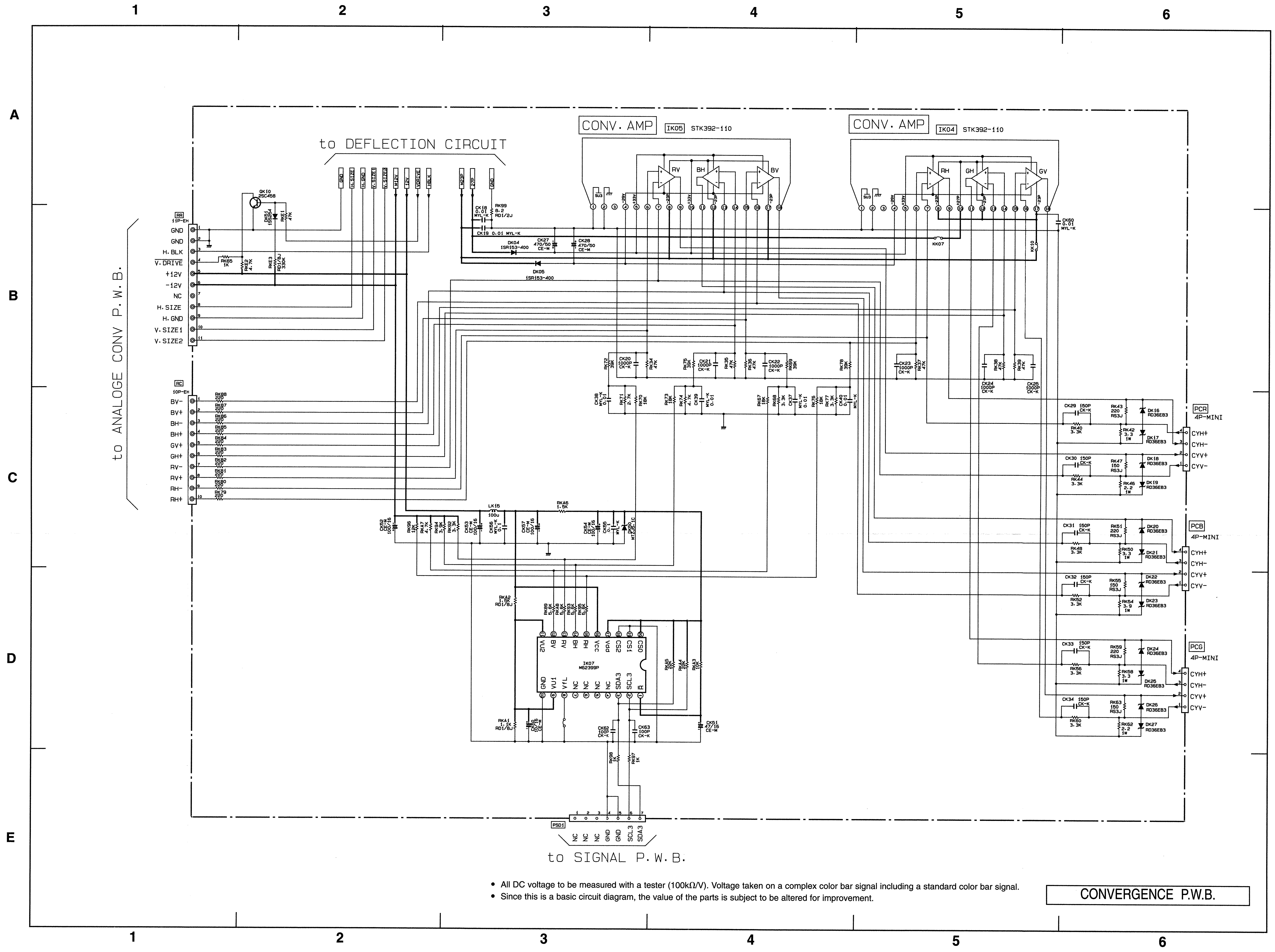
PRODUCT SAFETY NOTE: Components marked with a ⚠ and shaded have special characteristics important to safety. Before replacing any of these components, read carefully the PRODUCT SAFETY NOTICE of this Service Manual. Don't degrade the safety of the receiver through improper servicing.

BASIC CIRCUIT DIAGRAM

Circuit No.	Pin No.	Voltage DC
IK04	1	0
	2	0
	3	-29.5
	4	-30.6
	5	35.2
	6	0
	7	0
	8	-22.4
	9	0
	10	27.4
	11	0
	12	-22.9
	13	0
	14	0
	15	0
	16	0
	17	-22.5
	18	0

Circuit No.	Pin No.	Voltage DC
IK05	1	0
	2	0
	3	-29.5
	4	-30.7
	5	35.2
	6	0
	7	-0.8
	8	-22.47
	9	-0.5
	10	27.4
	11	-0.6
	12	-22.5
	13	-0.5
	14	-0.5
	15	-0.3
	16	-0.3
	17	-22.5
	18	-0.2

Circuit No.	Pin No.	Voltage DC
IK07	1	5.3
	2	4.95
	3	5.0
	4	0.0
	5	0.0
	6	0.0
	7	0.0
	8	0
	9	4.9
	10	0
	11	4.85
	12	5.84
	13	5.84
	14	5.84
	15	5.84
	16	12.1
	17	5.24
	18	0
	19	0
	20	5.24
QK10	E	0.6
	B	0
	C	0.4


1
2
3
4
5
6
A
B
C
D
E
CONV. AMP
IK05 STK392-110
CONV. AMP
IK04 STK392-110
RV
BH
BV
RH
GH
GV
to DEFLECTION CIRCUIT
to ANALOGE CONV P.W.B.
GND
GND
H.BLK
V.DRIVE
+12V
-12V
NC
H.SIZE
H.GND
V.SIZE1
V.SIZE2
BV-
BV+
BH-
BH+
GV+
GH+
RV-
RV+
RH-
RH+
QK10 2SC458
DK04 1SR153-400
DK05 1SR153-400
IK07 M52399P
VU2
BV
RV
BH
RH
Vcc
Vdd
CS2
CS1
CS0
GND
VU1
YFL
NC
NC
NC
SDA3
SCL3
LK15 100u
PCR 4P-MINI
PCB 4P-MINI
PCG 4P-MINI
CYH+
CYH-
CYV+
CYV-
PSD1
NC
NC
NC
GND
GND
SCL3
SDA3
to SIGNAL P.W.B.

- All DC voltage to be measured with a tester (100kΩ/V). Voltage taken on a complex color bar signal including a standard color bar signal.
- Since this is a basic circuit diagram, the value of the parts is subject to be altered for improvement.

CONVERGENCE P.W.B.

BASIC CIRCUIT DIAGRAM

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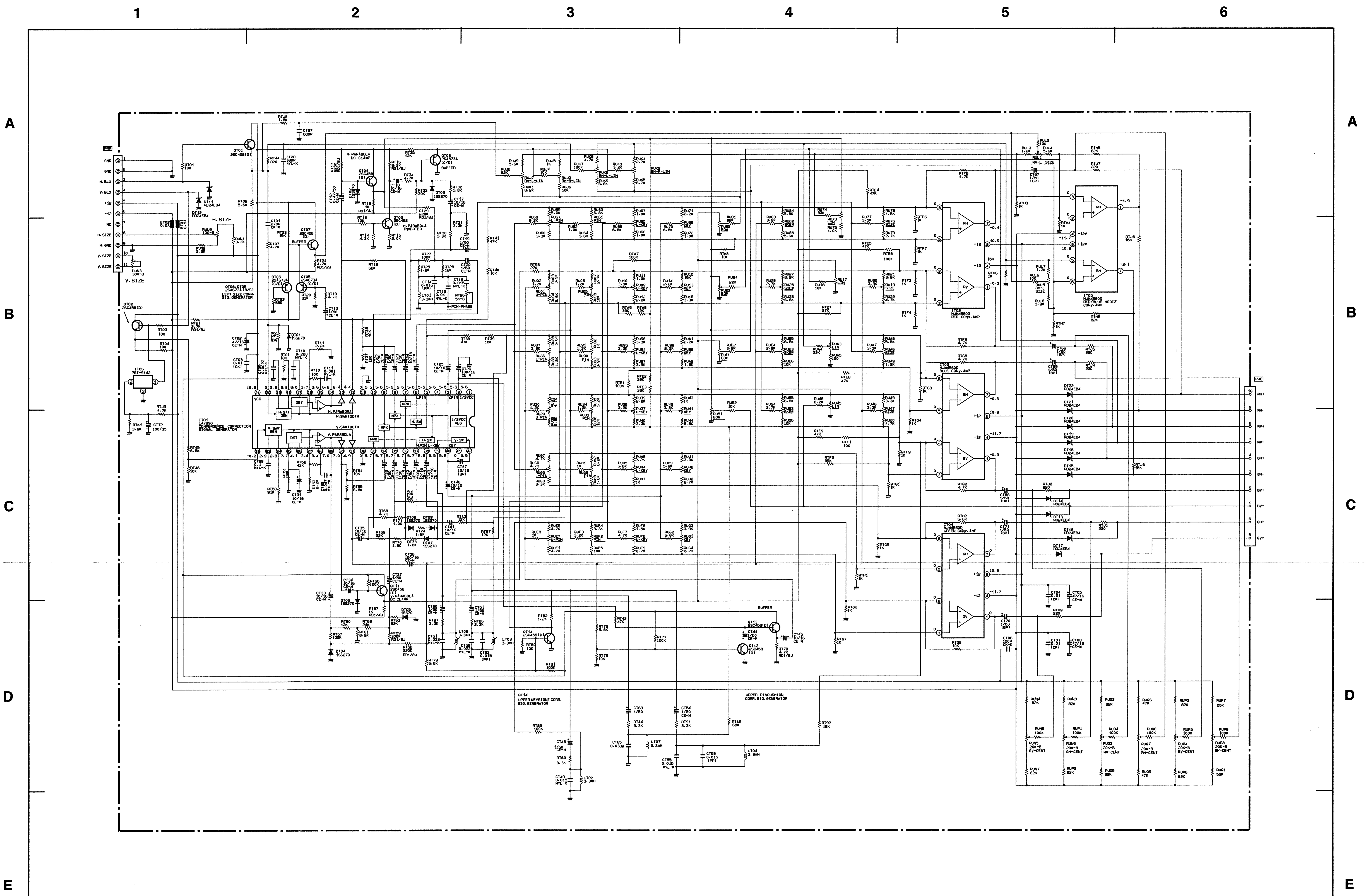
1
2
3
4
5
6
A
B
C
D
E
V-SIZE
H.SIZE
BUFFER
IT01 LA7860 CONVERGENCE CORRECTION SIGNAL GENERATOR
IT02 RED CONV. AMP
IT03 BLUE CONV. AMP
IT04 GREEN CONV. AMP
IT05 RED/BLUE HORIZ CONV. AMP
IT06 PST-9142
QT14 UPPER KEYSTONE CORR. SIG. GENERATOR
UPPER PINCUSHION CORR. SIG. GENERATOR

- All DC voltage to be measured with a tester (100kΩ/V). Voltage taken on a complex color bar signal including a standard color bar signal.
- Since this is a basic circuit diagram, the value of the parts is subject to be altered for improvement.

AP91 ANALOG CONVERGENCE CORRECTION P.W.B.

Circuit No.	Pin Name	Voltage DC
IT01	1	5.5
	2	5.5
	3	5.5
	4	5.5
	5	5.5
	6	5.5
	7	5.5
	8	5.5
	9	5.5
	10	5.5
	11	0
	12	4.4
	13	6.4
	14	6.8
	15	3.6
	16	3.7
	17	8
	18	2.8
	19	2.8
	20	0
	21	10.9
	22	-0.2
	23	2.9
	24	2.8
	25	7.7
	26	4.1
	27	3.4
	28	3.4
	29	7
	30	7
	31	4.9
	32	0
	33	5.7
	34	5.7
	35	5.7
	36	5.7
	37	5.7
	38	5.5
	39	5.5
	40	5.5
	41	0
	42	5.5

Circuit No.	Pin Name	Voltage DC
IT02	1	-0.3
	2	0
	3	0
	4	-11.7
	5	0
	6	0
	7	-0.4
	8	10.9
IT03	1	-0.3
	2	0
	3	0
	4	-11.7
	5	0
	6	0
	7	-0.6
	8	10.9
IT04	1	0
	2	0
	3	0
	4	-11.7
	5	0
	6	0
	7	0
	8	10.9
IT05	1	-1.9
	2	0
	3	0
	4	-11.7
	5	0
	6	0
	7	-2.1
	8	10.9
IT06	1	0.4
	2	4.8
	3	0

Circuit No.	Pin Name	Voltage DC
QT01	B	1.4
	C	10.9
	E	1
QT02	B	0.4
	C	10.9
	E	-0.2
QT03	B	1.9
	C	5.5
	E	1.3
QT04	B	-1.4
	C	10.9
	E	-2.1
QT05	B	0.2
	C	-8.2
	E	0.2
QT06	B	0
	C	-8.2
	E	0.2
QT07	B	0.2
	C	10.9
	E	-0.5
QT08	B	-0.4
	C	0
	E	0.2
QT11	B	-1.3
	C	10.9
	E	-2
QT12	B	0.2
	C	0
	E	0
QT13	B	2.5
	C	10.9
	E	1.8
QT14	B	0.2
	C	0
	E	0

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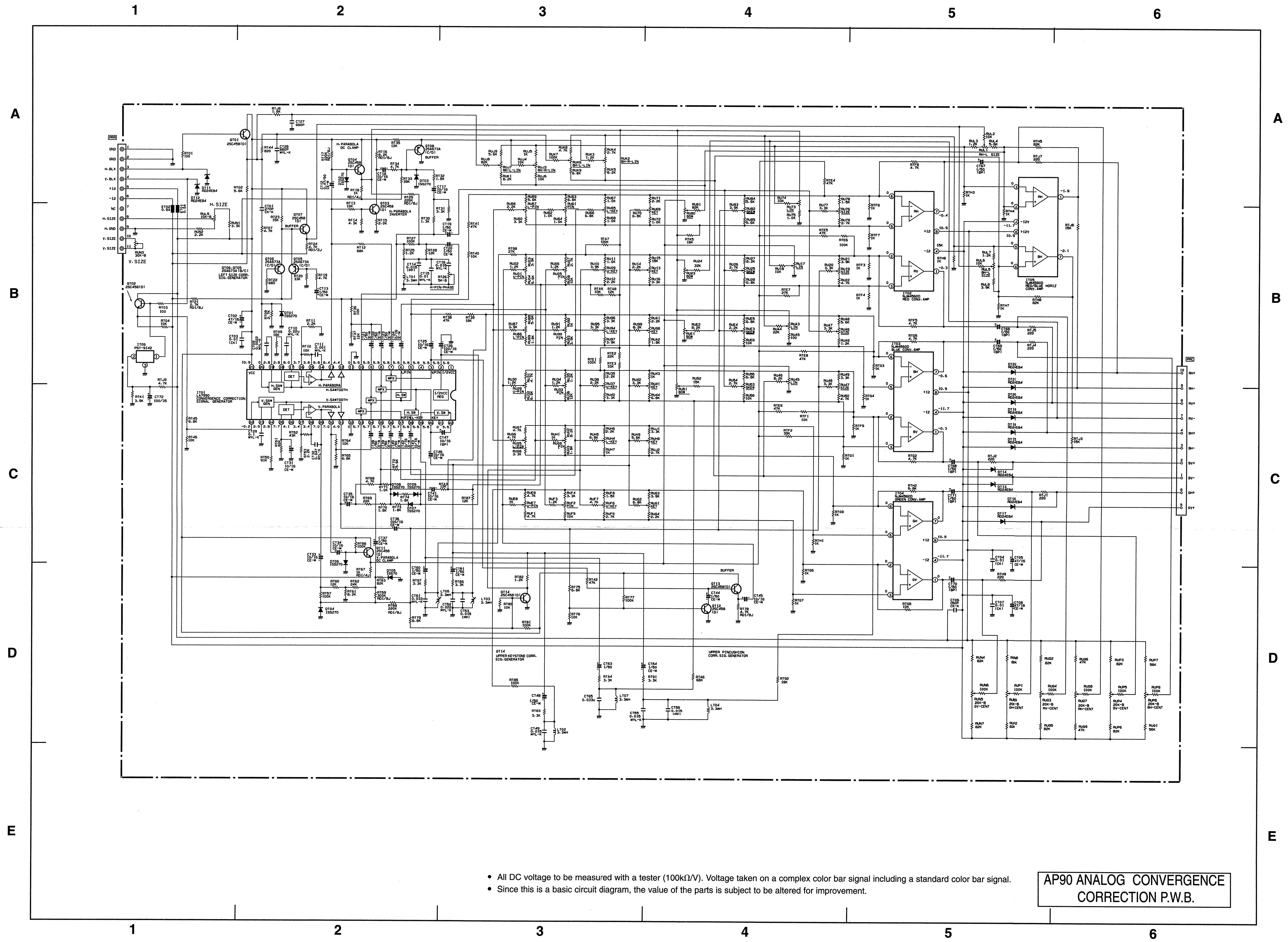
BASIC CIRCUIT DIAGRAM

CONVERGENCE CORR.
TERMINAL

Circuit No.	Pin Name	Voltage DC
IT01	1	5.5
	2	5.5
	3	5.5
	4	5.5
	5	5.5
	6	5.5
	7	5.5
	8	5.5
	9	5.5
	10	5.5
	11	0
	12	4.4
	13	6.4
	14	6.8
	15	3.6
	16	3.7
	17	8
	18	2.8
	19	2.8
	20	0
	21	10.9
	22	-0.2
	23	2.9
	24	2.8
	25	7.7
	26	4.1
	27	3.4
	28	3.4
	29	7
	30	7
	31	4.9
	32	0
	33	5.7
	34	5.7
	35	5.7
	36	5.7
	37	5.7
	38	5.5
	39	5.5
	40	5.5
	41	0
	42	5.5

Circuit No.	Pin Name	Voltage DC
IT02	1	-0.3
	2	0
	3	0
	4	-11.7
	5	0
	6	0
	7	-0.4
	8	10.9
IT03	1	-0.3
	2	0
	3	0
	4	-11.7
	5	0
	6	0
	7	-0.6
	8	10.9
IT04	1	0
	2	0
	3	0
	4	-11.7
	5	0
	6	0
	7	0
	8	10.9
IT05	1	-1.9
	2	0
	3	0
	4	-11.7
	5	0
	6	0
	7	-2.1
	8	10.9
IT06	1	0.4
	2	4.8
	3	0

Circuit No.	Pin Name	Voltage DC
QT01	B	1.4
	C	10.9
	E	1
QT02	B	0.4
	C	10.9
	E	-0.2
QT03	B	1.9
	C	5.5
	E	1.3
QT04	B	-1.4
	C	10.9
	E	-2.1
QT05	B	0.2
	C	-8.2
	E	0.2
QT06	B	0
	C	-8.2
	E	0.2
QT07	B	0.2
	C	10.9
	E	-0.5
QT08	B	-0.4
	C	0
	E	0.2
QT11	B	-1.3
	C	10.9
	E	-2
QT12	B	0.2
	C	0
	E	0
QT13	B	2.5
	C	10.9
	E	1.8
QT14	B	0.2
	C	0
	E	0


1
2
3
4
5
6
A
B
C
D
E
IT01
LA7990
CONVERGENCE CORRECTION
SIGNAL GENERATOR
H.SAW GEN
V.SAW GEN
DET
H.PARABORA
H.SAWTOOTH
V.SAWTOOTH
V.PARABOLA
MPX
H.SW
V.SW
1/2VCC REG
IT02
NJM4560D
RED CONV.AMP
IT03
NJM4560D
BLUE CONV.AMP
IT04
NJM4560D
GREEN CONV.AMP
IT05
NJM4560D
RED/BLUE HORIZ
CONV.AMP
H.SIZE
V.SIZE
BUFFER
UPPER KEYSTONE CORR.
SIG.GENERATOR
UPPER PINCUSHION
CORR.SIG.GENERATOR

- All DC voltage to be measured with a tester (100kΩ/V). Voltage taken on a complex color bar signal including a standard color bar signal.
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AP90 ANALOG CONVERGENCE
CORRECTION P.W.B.

BASIC CIRCUIT DIAGRAM

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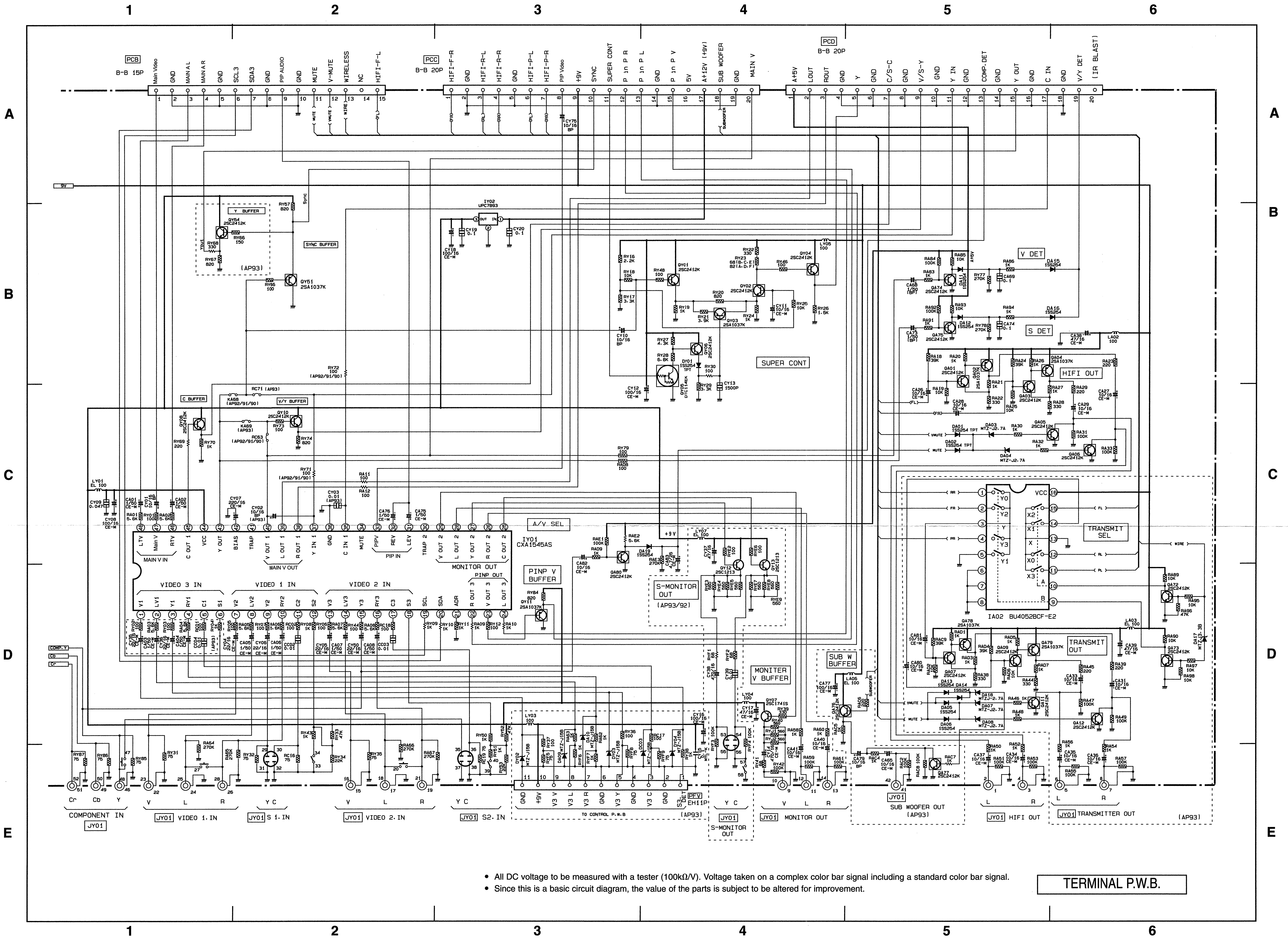
1
2
3
4
5
6
A
B
C
D
E
PCB
B-B 15P
Main Video
GND
MAIN A L
MAIN A R
GND
SCL3
SDA3
GND
PIP AUDIO
GND
MUTE
V-MUTE
WIRELESS
NC
HIFI-F-L
PCC
B-B 20P
HIFI-F-R
GND
HIFI-R-L
HIFI-R-R
GND
HIFI-P-L
HIFI-P-R
PIP Video
+9V
SYNC
SUPER CONT
P in P R
P in P L
GND
P in P V
5V
A+12V (+9V)
SUB WOOFER
GND
MAIN V
PCD
B-B 20P
A+5V
LOUT
ROUT
GND
Y
GND
C/S-C
GND
V/S-Y
GND
Y IN
GND
COMP. DET
GND
Y OUT
GND
C IN
GND
V/Y DET
(IR BLAST)
9V
Y BUFFER
SYNC BUFFER
QY54 2SC2412K
QY51 2SA1037K
(AP93)
IY02 UPC7893
SUPER CONT
V DET
S DET
HIFI OUT
C BUFFER
V/Y BUFFER
QY10 2SC2412K
A/V SEL
IY01 CXA1545AS
MAIN V IN
MAIN V OUT
PIP IN
MONITOR OUT
PINP OUT
PINP V BUFFER
VIDEO 3 IN
VIDEO 1 IN
VIDEO 2 IN
S-MONITOR OUT
(AP93/92)
MONITER V BUFFER
SUB W BUFFER
TRANSMIT SEL
IA02 BU4052BCF-E2
TRANSMIT OUT
COMP. Y
Cb
Cr
COMPONENT IN
JY01
VIDEO 1 IN
S 1 IN
VIDEO 2 IN
S2 IN
TO CONTROL P.W.B
PFV
EH11P
S-MONITOR OUT
MONITOR OUT
SUB WOOFER OUT
(AP93)
HIFI OUT
TRANSMITTER OUT

- All DC voltage to be measured with a tester (100kΩ/V). Voltage taken on a complex color bar signal including a standard color bar signal.
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TERMINAL P.W.B.

Circuit No.	Pin No.	Voltage DC
IY01	1	4.7
	2	4.7
	3	4.7
	4	4.7
	5	4.7
	6	0.5
	7	4.7
	8	4.7
	9	4.7
	10	4.7
	11	4.7
	12	2.3
	13	4.7
	14	4.7
	15	4.7
	16	4.7
	17	4.7
	18	2.3
	19	4.9
	20	4.9
	21	4.7
	22	4.7
	23	4.6
	24	4.7
	25	4.7
	26	4.7
	27	4.7
	28	4.7
	29	4.7
	30	4.7
	31	4.7
	32	4.7
	33	4.7
	34	0
	35	4.7
	36	0
	37	4.7
	38	4.7
	39	4.7
	40	4.7
	41	4.7
	42	4.7
	43	4.6
	44	9.1
	45	4.6
	46	4.7
	47	4.7
	48	4.7

Circuit No.	Pin Name	Voltage DC
QA01	E	1.2
	B	1.8
	C	8.6
QA02	E	9.3
	B	8.6
	C	4.3
QA03	E	1.2
	B	1.8
	C	0
QA04	E	9.3
	B	8.6
	C	4.2
QA05	E	0
	B	0
	C	0
QA06	E	0
	B	0
	C	0
QA74	E	0
	B	0
	C	3.3
QA75	E	0
	B	0.6
	C	0

Circuit No.	Pin Name	Voltage DC
QA80	E	0
	B	0.5
	C	0
QY01	E	4.5
	B	5.1
	C	9.2
QY02	E	4.5
	B	5.1
	C	7.5
QY03	E	4.5
	B	4.5
	C	4.5
QY04	E	6.8
	B	7.5
	C	9.3
QY05	E	0
	B	2.1
	C	0
QY06	E	5.1
	B	5.7
	C	9.3
QY07	E	3.9
	B	4.6
	C	9.1
QY08	E	3.9
	B	4.6
	C	9.2
QY10	E	3.9
	B	4.6
	C	9.2
QY11	E	5.3
	B	4.7
	C	0
QY51	E	3.2
	B	2.6
	C	0
QY54	E	2.6
	B	3.2
	C	9.2

Circuit No.	Pin Name	Voltage DC
QY57	E	2.5
	B	3.1
	C	9.4
QY58	E	2.8
	B	3.4
	C	8.7
QY59	E	9.4
	B	8.7
	C	3.4
QY60	E	2.8
	B	3.4
	C	9.4
QY61	E	2.8
	B	3.4
	C	8.7
QY62	E	9.4
	B	8.7
	C	3.9
QY63	E	3.3
	B	3.9
	C	9.4

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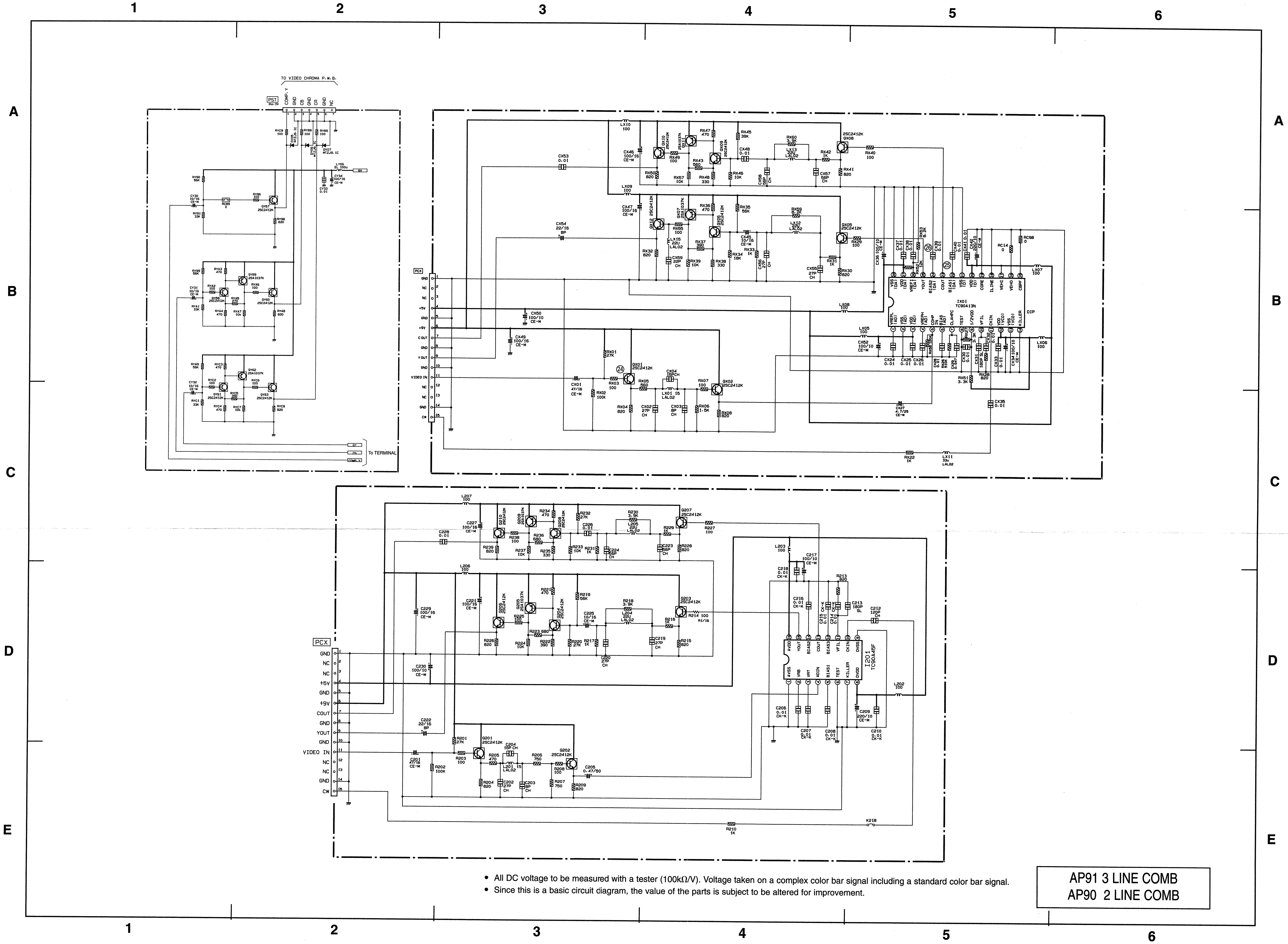
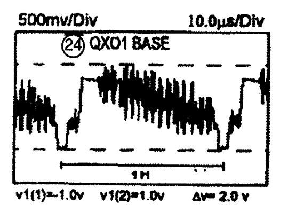
BASIC CIRCUIT DIAGRAM

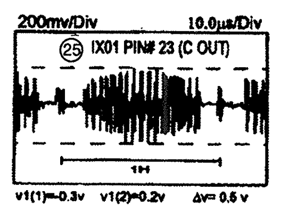
Circuit No.	Pin No.	Voltage DC
IX01	1	1.5
	2	0
	3	4.9
	4	3.4
	5	2.6
	6	1.3
	7	3.3
	8	0
	9	2.5
	10	0
	11	0
	12	5.1
	13	0
	14	0
	15	0
	16	0
	17	4.9
	18	0
	19	0
	20	4.9
	21	0
	22	3.5
	23	4.3
	24	0
	25	4.4
	26	3.6
	27	4.9
	28	0

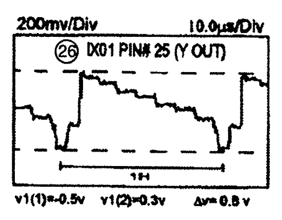
Circuit No.	Pin Name	Voltage DC
QX01	E	5.5
	B	6.2
	C	9.4
QX02	E	3.3
	B	4.1
	C	9.4
QX05	E	3.7
	B	4.4
	C	9.3
QX06	E	1.5
	B	2.2
	C	8.6
QX07	E	9.3
	B	8.6
	C	5.9
QX08	E	3.6
	B	4.3
	C	9.3
QX09	E	1.2
	B	1.8
	C	8.7
QX10	E	4.8
	B	5.5
	C	9.3
QX11	E	9.3
	B	8.7
	C	5.5
QX12	E	5.2
	B	5.9
	C	9.3


1
2
3
4
5
6
A
B
C
D
E
TO VIDEO CHROMA P.W.B.
To TERMINAL
PCX
GND
NC
NC
+5V
GND
+9V
COUT
GND
YOUT
GND
VIDEO IN
NC
NC
GND
CH
IX01
TC9041 3N
DIP
QX01 2SC2412K
QX02 2SC2412K
QX05 2SC2412K
QX06 2SC2412K
I201
TC9043F
Q201 2SC2412K
Q202 2SC2412K
Q203 2SC2412K
Q207 2SC2412K
LX01 15 LAL02
L201 15 LAL02
R210 5K
K218
RX22 1K
LX11 33u LAL02
(24)
(25)
(26)
AP91 3 LINE COMB
AP90 2 LINE COMB

- All DC voltage to be measured with a tester (100kΩ/V). Voltage taken on a complex color bar signal including a standard color bar signal.
- Since this is a basic circuit diagram, the value of the parts is subject to be altered for improvement.







BASIC CIRCUIT DIAGRAM

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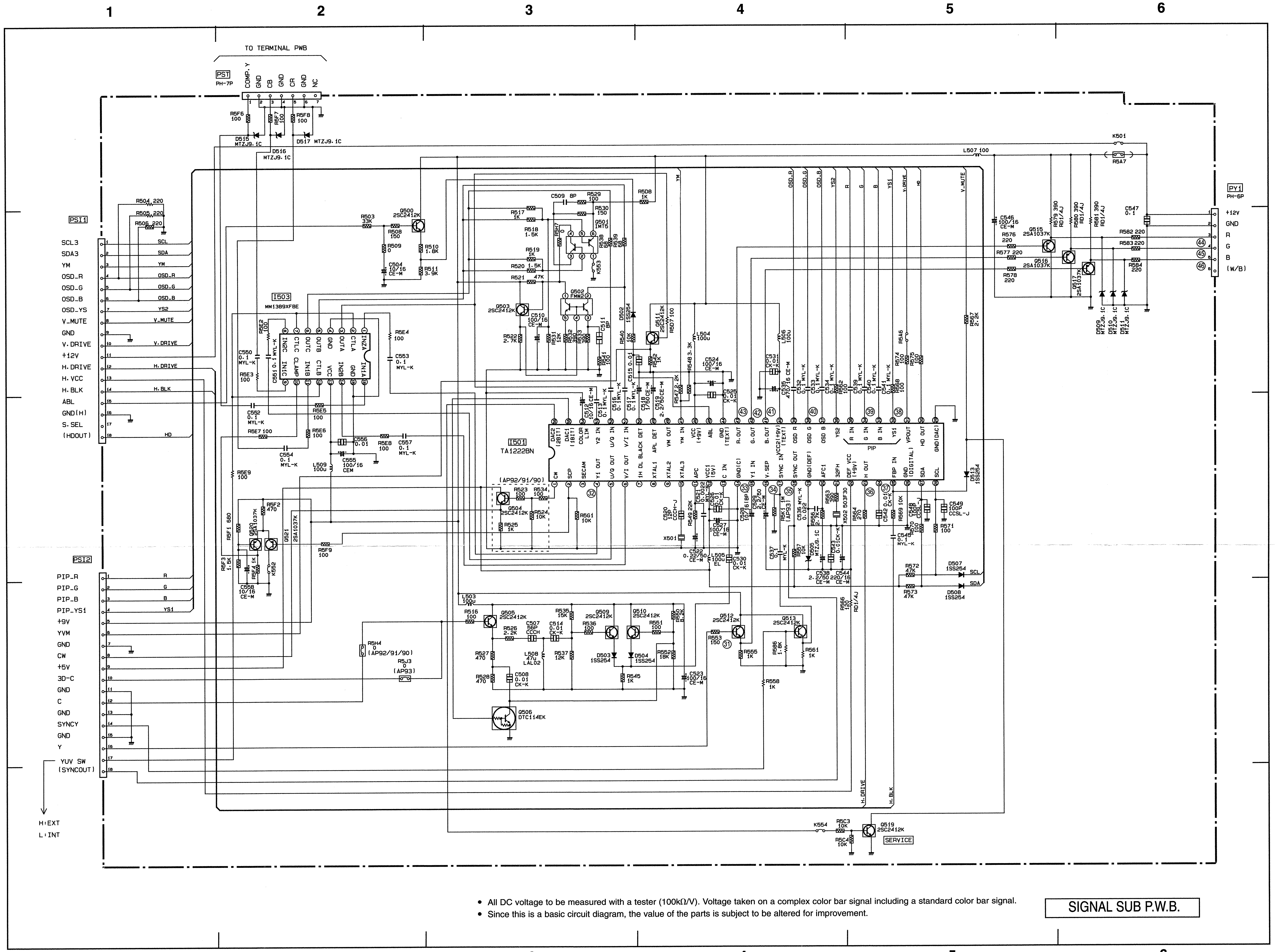
Circuit No.	Pin Name	Voltage DC
Q511	E	2.9
	B	3.5
	C	9.4
Q512	E	6.1
	B	6.8
	C	9.3
Q513	E	2.7
	B	3.4
	C	9.3
Q514	E	0
	B	0
	C	0
Q515	E	3.4
	B	2.8
	C	0
Q516	E	3.4
	B	3.1
	C	0
Q517	E	3.8
	B	3.2
	C	0
Q519	E	0
	B	0.3
	C	0
Q520	E	2.1
	B	6.4
	C	0
Q521	E	1.9
	B	1.3
	C	0


1
2
3
4
5
6
A
B
C
D
E
TO TERMINAL PWB
PST
PH-7P
COMP. Y
GND
CB
GND
CR
GND
NC
R5F6 100
R5F7 100
R5F8 100
D515 MTZJ9.1C
D516 MTZJ9.1C
D517 MTZJ9.1C
PSI1
SCL3
SDA3
YM
OSD_R
OSD_G
OSD_B
OSD_YS
V_MUTE
GND
V.DRIVE
+12V
H.DRIVE
H.VCC
H.BLK
ABL
GND(H)
S.SEL
(HDOUT)
R504 220
R505 220
R506 220
SCL
SDA
YM
OSD_R
OSD_G
OSD_B
YS2
V.MUTE
V.DRIVE
H.DRIVE
H.BLK
HD
I503
MM1389XFBE
I501
TA1222BN
(AP92/91/90)
Q500 2SC2412K
Q501 IMT6
Q502 FMW2
Q503 2SC2412K
Q504 2SC2412K
Q505 2SC2412K
Q506 DTC114EK
Q509 2SC2412K
Q510 2SC2412K
Q511 2SC2412K
Q512 2SC2412K
Q513 2SC2412K
Q515 2SA1037K
Q516 2SA1037K
Q517 2SA1037K
Q519 2SC2412K
Q520 2SA1037K
Q521 2SA1037K
X501
X502 503F30
L507 100
K501
R5A7
PY1
PH-6P
+12V
GND
R
G
B
(W/B)
D509 MTZJ9.1C
D510 MTZJ9.1C
D511 MTZJ9.1C
D503 1SS254
D504 1SS254
D507 1SS254
D508 1SS254
PSI2
PIP_R
PIP_G
PIP_B
PIP_YS1
+9V
YVM
GND
CW
+5V
3D-C
GND
C
GND
SYNCY
GND
Y
YUV SW
(SYNCOUT)
H:EXT
L:INT
R5H4 0 (AP92/91/90)
R5J3 0 (AP93)
K554
R5C3 10K
R5C4 10K
SERVICE
H.DRIVE
H.BLK
V_MUTE
31
32
33
34
35
36
37
38
39
40
41
42
43
44
45
46

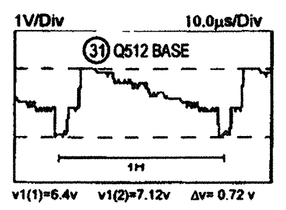
- All DC voltage to be measured with a tester (100kΩ/V). Voltage taken on a complex color bar signal including a standard color bar signal.
- Since this is a basic circuit diagram, the value of the parts is subject to be altered for improvement.

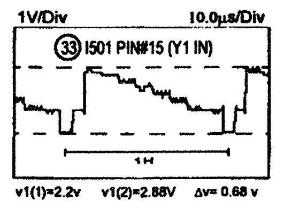
SIGNAL SUB P.W.B.

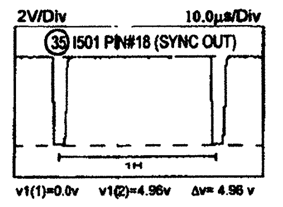
Circuit No.	Pin No.	Voltage DC
I501	1	3.0
	2	1.2
	3	4.1
	4	2.3
	5	2.6
	6	2.6
	7	0
	8	4.2
	9	4.2
	10	4.2
	11	2.1
	12	5.2
	13	0
	14	0
	15	2.8
	16	6.3
	17	0.5
	18	4.5
	19	0
	20	7.6
	21	6.2
	22	9.1
	23	1.5
	24	4.5
	25	1.4
	26	0
	27	4.9
	28	4.9
	29	0
	30	0
	31	4.7
	32	0
	33	3.5
	34	3.5
	35	3.5
	36	0
	37	3.5
	39	3.5
	40	9.1
	41	3.2
	42	2.8
	43	2.8
	44	0
	45	5.7
	46	9.1
	47	0
	48	3.7
	49	5.8
	50	5.3
	51	5.1
	52	5.1
	53	6.8
	54	6.7
	55	3.1
	56	3.1

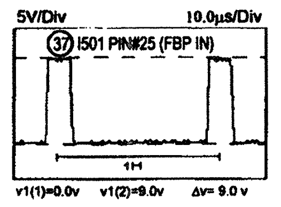
Circuit No.	Pin No.	Voltage DC
I503	1	4.2
	2	0
	3	3.5
	4	0
	5	3.2
	6	3.2
	7	0
	8	3.9
	9	3.9
	10	0
	11	3.9
	12	0
	13	9.4
	14	3.9
	15	0
	16	3.9

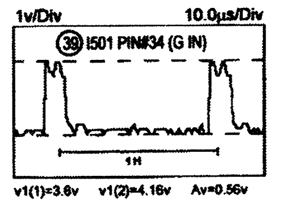
Circuit No.	Pin Name	Voltage DC
Q500	E	8.1
	B	8.5
	C	9.3
Q501	1	0
	2	3.1
	3	3.5
	4	1.3
	5	3.1
	6	3.5
Q502	1	1.2
	2	3.1
	3	0
	4	0.7
	5	0
Q503	E	0.5
	B	1.3
	C	9.5
Q505	E	3.2
	B	4.1
	C	9.5
Q506	E	0
	B	3.1
	C	0
Q509	E	3.4
	B	4.1
	C	9.4
Q510	E	0
	B	0
	C	9.3

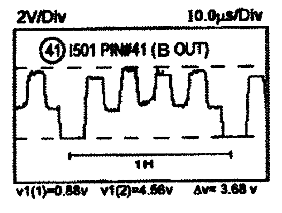


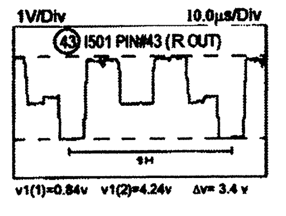


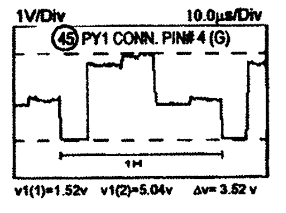


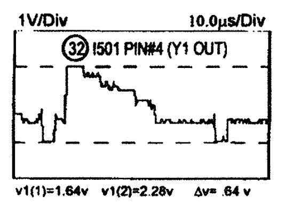


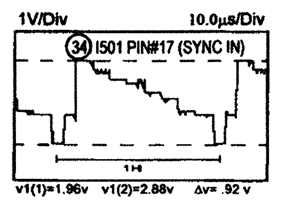


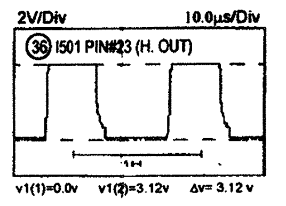


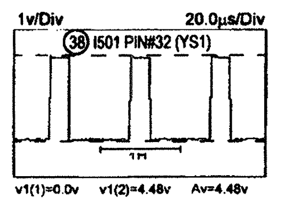


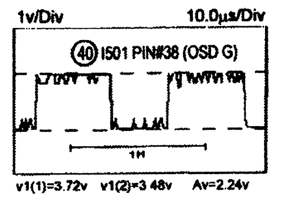


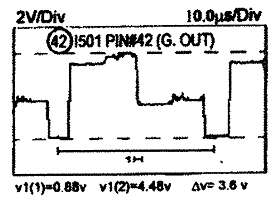


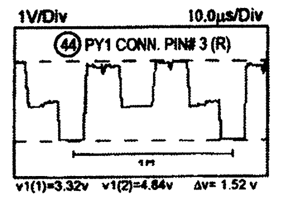


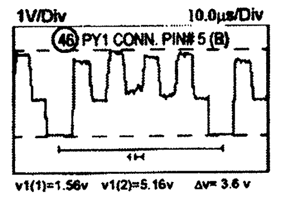












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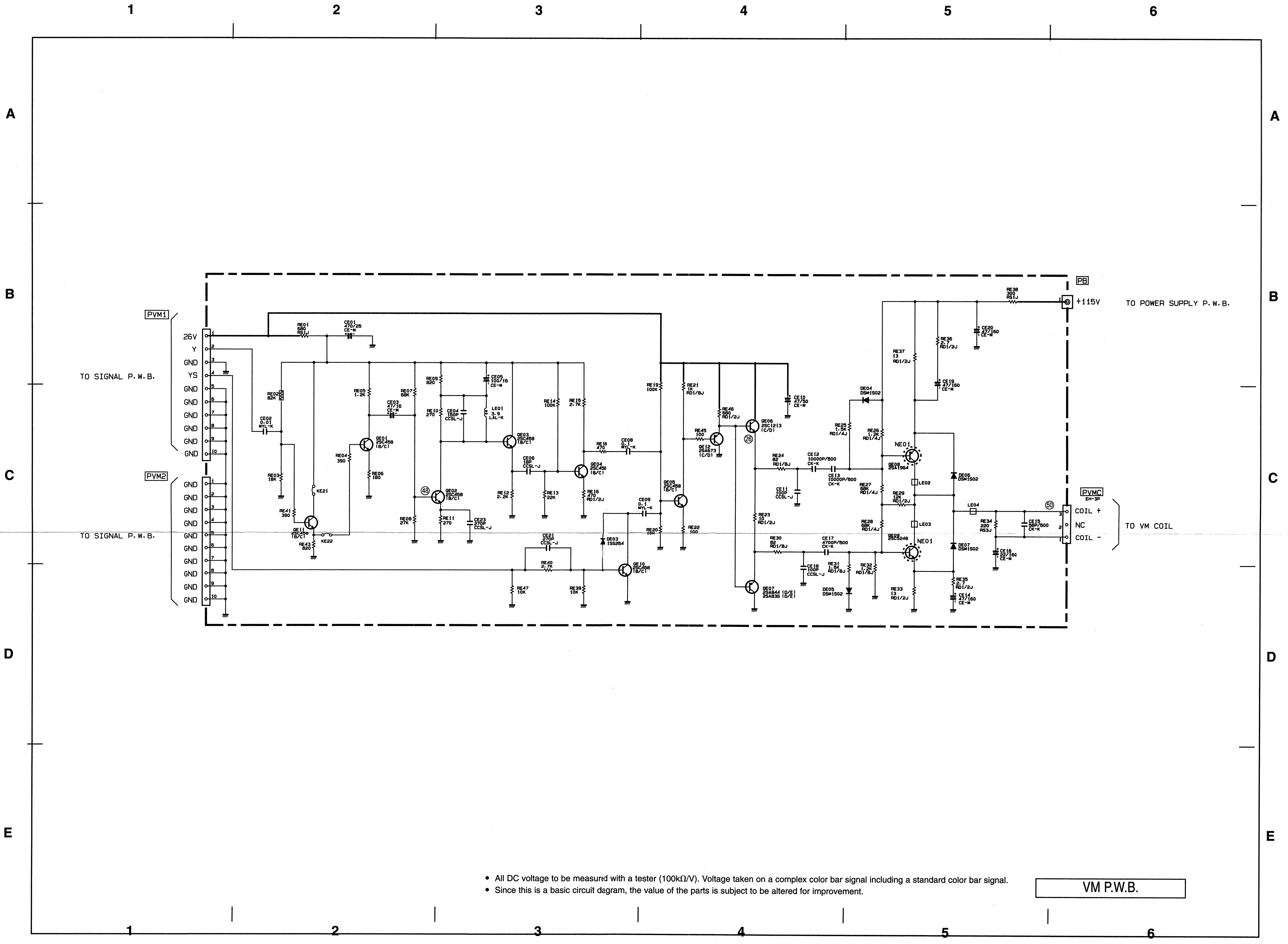
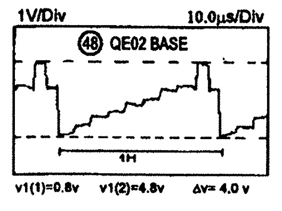
BASIC CIRCUIT DIAGRAM

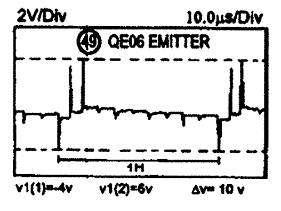
Circuit No.	Pin Name	Voltage DC
QE01	E	0.7
	B	1.4
	C	7.2
QE02	E	2.1
	B	2.8
	C	5.6
QE03	E	5.0
	B	5.6
	C	12.1
QE04	E	1.3
	B	2.0
	C	4.7
QE05	E	1.3
	B	2.0
	C	13.9
QE06	E	14.0
	B	14.6
	C	25.2
QE07	E	14.0
	B	14.6
	C	0
QE08	E	116.1
	B	115.4
	C	60.0
QE09	E	0
	B	0.7
	C	60.0
QE10	E	0
	B	0
	C	0
QE11	E	1.5
	B	2.1
	C	12.2
QE12	E	14.6
	B	14.0
	C	0

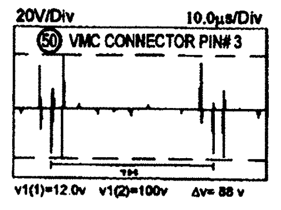

1
2
3
4
5
6
A
B
C
D
E
PVM1
26V
Y
GND
YS
GND
GND
GND
GND
GND
GND
TO SIGNAL P.W.B.
PVM2
GND
GND
GND
GND
GND
GND
GND
GND
GND
GND
TO SIGNAL P.W.B.
PB
+115V
TO POWER SUPPLY P.W.B.
PVMC
EH-3P
COIL +
NC
COIL -
TO VM COIL
QE01 2SC458 (B/C)
QE02 2SC458 (B/C)
QE03 2SC458 (B/C)
QE04 2SC458 (B/C)
QE05 2SC458 (B/C)
QE06 2SC1213 (C/D)
QE07 2SA844 (D/E) 2SA836 (D/E)
QE08 2SA1964
QE09 2SC5248
QE10 2SC458 (B/C)
QE11 2SC458 (B/C)
QE12 2SA673 (C/D)
NE01
DE03 1SS254
DE04 DSM1S02
DE05 DSM1S02
DE06 DSM1S02
DE07 DSM1S02
LE01
LE02
LE03
LE04
KE21
KE22
(48)
(49)
(50)

- All DC voltage to be measured with a tester (100kΩ/V). Voltage taken on a complex color bar signal including a standard color bar signal.
- Since this is a basic circuit diagram, the value of the parts is subject to be altered for improvement.

VM P.W.B.







BASIC CIRCUIT DIAGRAM

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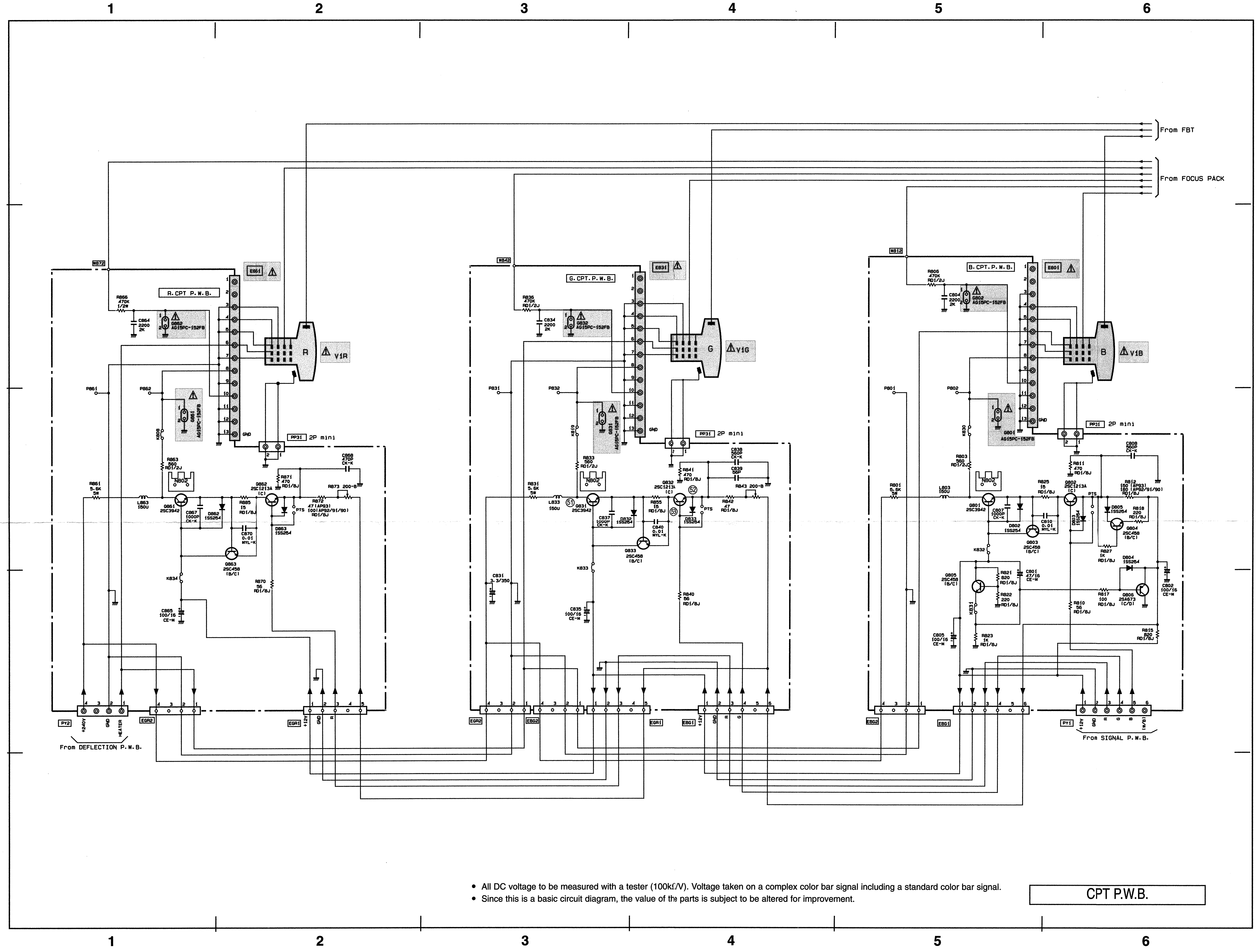
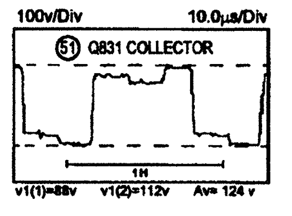

1
2
3
4
5
6
A
B
C
D
E
From FBT
From FOCUS PACK
W872
E851
R.CPT P.W.B.
R866 470K 1/2W
C864 2200 2K
G852 AG15PC-152FB
R
V1R
P861
P862
G861 AG15PC-152FB
K808
GND
PP31 2P mini
C868 470P CK-K
R863 560 RD1/2J
N802
R871 470 RD1/8J
Q862 2SC1213A (C)
R873 200-B
R861 5.6K 5W
L863 150U
Q861 2SC3942
C867 1000P CK-K
D862 1SS254
R885 15 RD1/8J
PTS
R872 47 (AP93) 100 (AP92/91/90) RD1/8J
C870 0.01 MYL-K
D863 1SS254
Q863 2SC458 (B/C)
K834
R870 56 RD1/8J
C865 100/16 CE-M
W842
G.CPT.P.W.B.
E831
R836 470K RD1/2J
C834 2200 2K
G832 AG15PC-152FB
G
V1G
P831
P832
K810
G831 AG15PC-152FB
R833 560 RD1/2J
C836 560P CK-K
R841 470 RD1/8J
Q832 2SC1213A (C)
C839 56P
R843 200-B
R831 5.6K 5W
L833 150U
Q831 2SC3942
(51)
(52)
(53)
C837 1000P CK-K
D832 1SS254
R855 15 RD1/8J
R842 47 RD1/8J
C840 0.01 MYL-K
D833 1SS254
Q833 2SC458 (B/C)
K833
C831 3.3/350
C835 100/16 CE-M
R840 56 RD1/8J
W812
B.CPT.P.W.B.
E801
R806 470K RD1/2J
C804 2200 2K
G802 AG15PC-152FB
B
V1B
P801
P802
K830
G801 AG15PC-152FB
R803 560 RD1/2J
C808 560P CK-K
R811 470 RD1/8J
R801 5.6K 5W
L803 150U
Q801 2SC3942
C807 1000P CK-K
D802 1SS254
R825 15 RD1/8J
Q802 2SC1213A (C)
R812 150 (AP93) 180 (AP92/91/90) RD1/8J
C810 0.01 MYL-K
D803
D805 1SS254
R818 220 RD1/8J
Q804 2SC458 (B/C)
Q803 2SC458 (B/C)
R827 1K RD1/8J
D804 1SS254
K832
Q805 2SC458 (B/C)
R821 820 RD1/8J
C801 47/16 CE-M
R822 220 RD1/8J
R817 100 RD1/8J
Q806 2SA673 (C/D)
C802 100/16 CE-M
K831
R810 56 RD1/8J
C805 100/16 CE-M
R823 1K RD1/8J
R815 820 RD1/8J
PY2
+240V
GND
HEATER
From DEFLECTION P.W.B.
EGR2
EGR1
+12V
GND
R
EBG2
EBG1
G
PY1
B
(W/B)
From SIGNAL P.W.B.

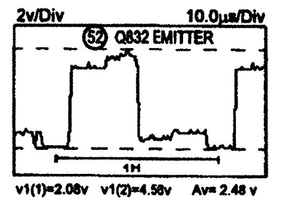
- All DC voltage to be measured with a tester (100kΩ/V). Voltage taken on a complex color bar signal including a standard color bar signal.
- Since this is a basic circuit diagram, the value of the parts is subject to be altered for improvement.

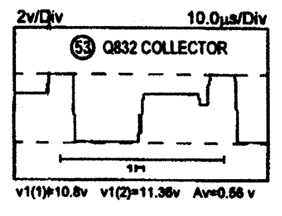
CPT P.W.B.

Circuit No.	Pin Name	Voltage DC
Q801	E	11.2
	B	11.7
	C	134.5
Q802	E	3.4
	B	3.8
	C	10.9
Q803	E	10.9
	B	11.1
	C	11.7
Q804	E	2.9
	B	3.4
	C	3.2
Q805	E	1.8
	B	2.5
	C	11.7
Q806	E	1.5
	B	1.8
	C	0
Q831	E	11.15
	B	11.7
	C	138.2
Q832	E	3.4
	B	3.8
	C	10.9

Circuit No.	Pin Name	Voltage DC
Q833	E	10.9
	B	11.2
	C	11.7
Q834	E	3.1
	B	0.9
	C	3.4
Q861	E	11.2
	B	11.7
	C	155.9
Q862	E	3.3
	B	3.8
	C	11.1
Q863	E	11.1
	B	11.2
	C	11.7
Q864	E	3.2
	B	1.2
	C	3.2







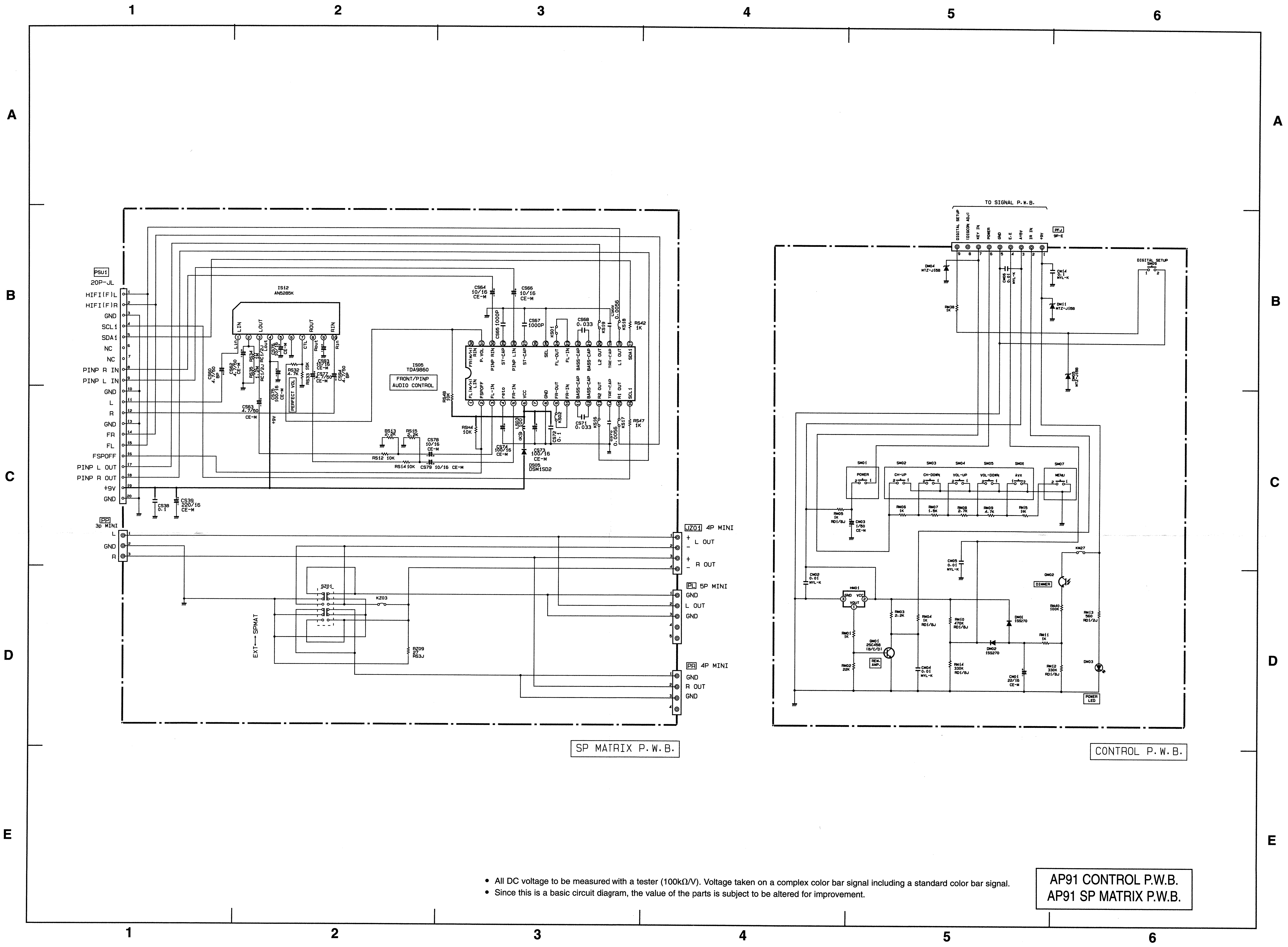
PRODUCT SAFETY NOTE: Components marked with a ⚠ and shaded have special characteristics important to safety. Before replacing any of these components, read carefully the PRODUCT SAFETY NOTICE of this Service Manual. Don't degrade the safety of the receiver through improper servicing.

BASIC CIRCUIT DIAGRAM

Circuit No.	Pin No.	Voltage DC
IS05	1	4.3
	2	0
	3	4.3
	4	8.5
	5	4.3
	6	8.6
	7	4.3
	8	0
	9	4.3
	10	4.3
	11	4.3
	12	4.3
	13	4.3
	14	4.3
	15	4.3
	16	4.9
	17	4.9
	18	4.3
	19	4.3
	20	4.3
	21	4.3
	22	4.3
	23	4.3
	24	4.3
	25	0
	26	4.3
	27	4.3
	28	4.3
	29	4.3
	30	4.3
	31	0
	32	4.3

Circuit No.	Pin No.	Voltage DC
IS12	1	4.7
	2	1.2
	3	4.7
	4	1.4
	5	4.7
	6	0
	7	0
	8	4.7
	9	2.0
	10	4.7

Circuit No.	Pin Name	Voltage DC
QM01	E	0
	B	0.7
	C	0.1
QM02	E	1.4
	B	-
	C	9.3

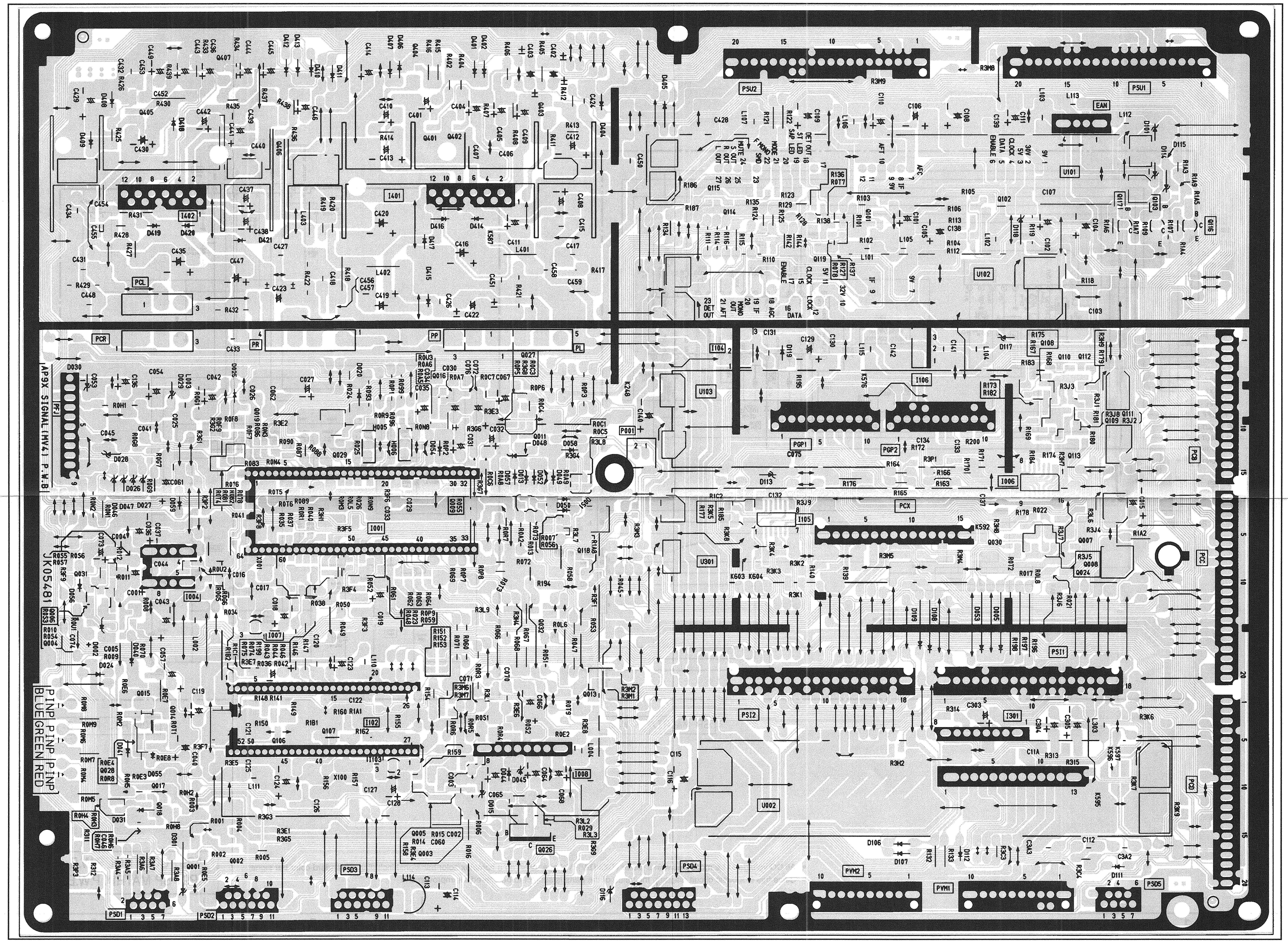

1
2
3
4
5
6
A
B
C
D
E
PSU1
20P-JL
HIFI(F)L
HIFI(F)R
GND
SCL1
SDA1
NC
NC
PINP R IN
PINP L IN
GND
L
R
GND
FR
FL
FSPOFF
PINP L OUT
PINP R OUT
+9V
GND
PP
3P MINI
L
GND
R
IS12
AN5285K
LIN
LOUT
ROUT
RIN
PERFECT VOL
IS05
TDA9860
FRONT/PINP
AUDIO CONTROL
CS38
0.1
CS39
220/16
CE-M
CS64
10/16
CE-M
CS66
10/16
CE-M
CS67
1000P
CS68
0.033
CS71
0.033
RS42
1K
RS47
1K
RS12 10K
RS14 10K
CS79 10/16 CE-M
RS13
2.2K
RS15
2.2K
CS78
10/16
CE-M
RS44
10K
CS74
100/16
CE-M
CS73
100/16
CE-M
DS05
DSM1SD2
S201
EXT — SPMAT
KZ03
RZ09
27
RS3J
JZ01 4P MINI
+ L OUT
-
+ R OUT
-
PL 5P MINI
GND
L OUT
GND
PR 4P MINI
GND
R OUT
GND
SP MATRIX P.W.B.
TO SIGNAL P.W.B.
DIGITAL SETUP
POWER
GND
+5V
IR IN
+9V
PMJ
9P-E
DM04
MTZ-J18B
RM38
1K
CM14
0.1
MYL-K
DM11
MTZ-J18B
DIGITAL SETUP
SM09
SM01
POWER
SM02
CH-UP
SM03
CH-DOWN
SM04
VOL-UP
SM05
VOL-DOWN
SM06
AVX
SM07
MENU
RM05
1K
RM06
1K
RM07
1.5K
RM08
2.7K
RM09
4.7K
CM03
1/50
CE-M
CM05
0.01
MYL-K
CM02
0.01
MYL-K
HM01
GND VCC
VOUT
RM03
2.2K
RM04
1K
RD1/8J
RM10
470K
RD1/8J
DM01
1SS270
DM02
1SS270
RM01
1K
QM01
2SC458
RM02
22K
REM.
AMP.
CM04
0.01
MYL-K
RM14
330K
RD1/8J
CM01
22/16
CE-M
RM11
1K
RM12
330K
RD1/8J
RM13
560
RD1/2J
KM27
DM02
DIMMER
DM03
POWER
LED
CONTROL P.W.B.

- All DC voltage to be measured with a tester (100kΩ/V). Voltage taken on a complex color bar signal including a standard color bar signal.
- Since this is a basic circuit diagram, the value of the parts is subject to be altered for improvement.

AP91 CONTROL P.W.B.
AP91 SP MATRIX P.W.B.

PRINTED CIRCUIT BOARD

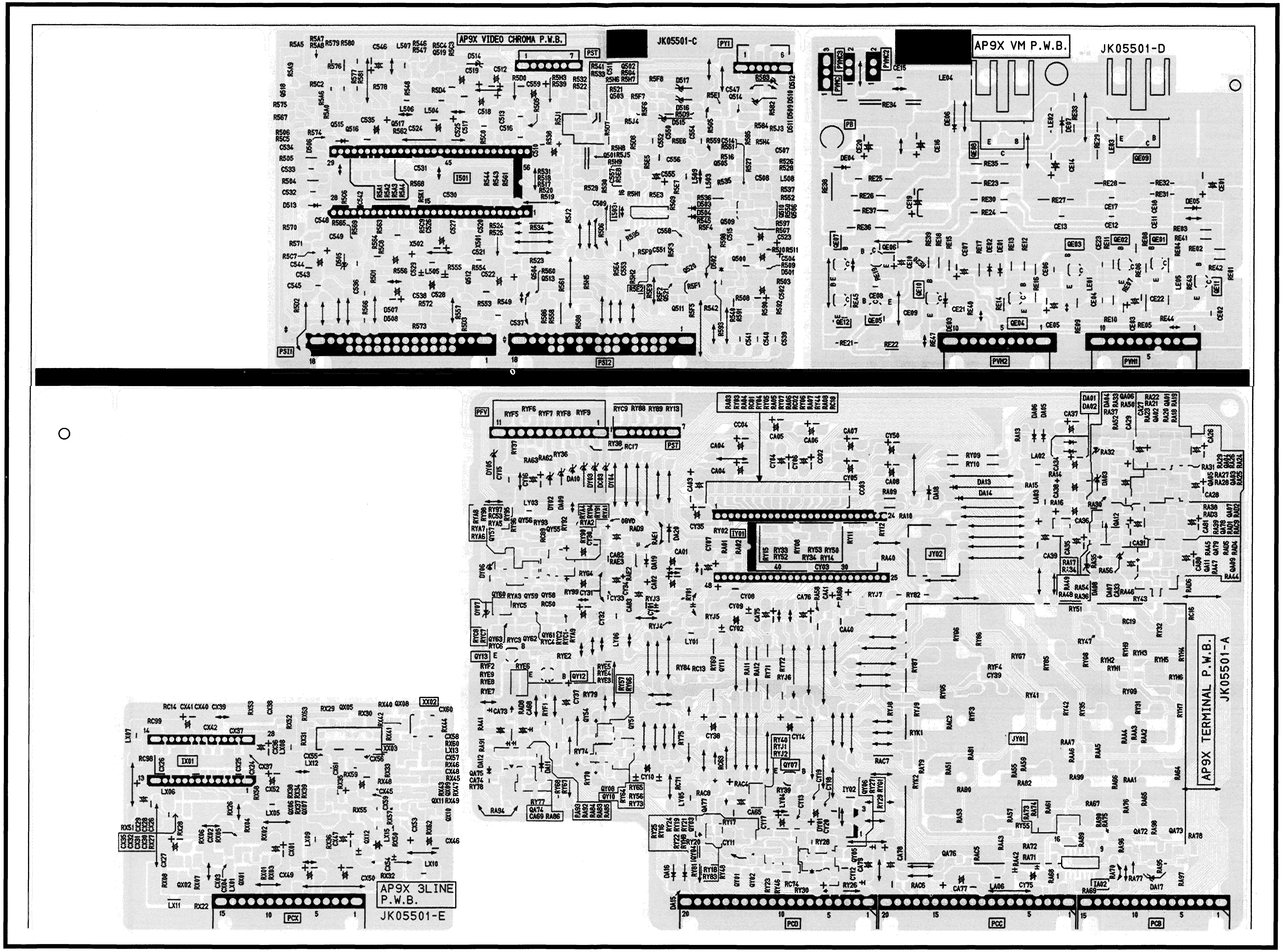
SIGNAL P.W.B.


AP9X SIGNAL(MV4) P.W.B
JK05481
PINP BLUE
PINP GREEN
PINP RED
PSU2
PSU1
PCL
PCR
PR
PP
PL
PGP1
PGP2
PCX
PSI2
PSI1
PSD1
PSD2
PSD3
PSD4
PSD5
PVM1
PVM2
PCB
PCC
PCD
PFJ
P001
I401
I402
I001
I004
I007
I008
I102
I103
I104
I105
I106
I301
U101
U102
U103
U301
U002
EAN

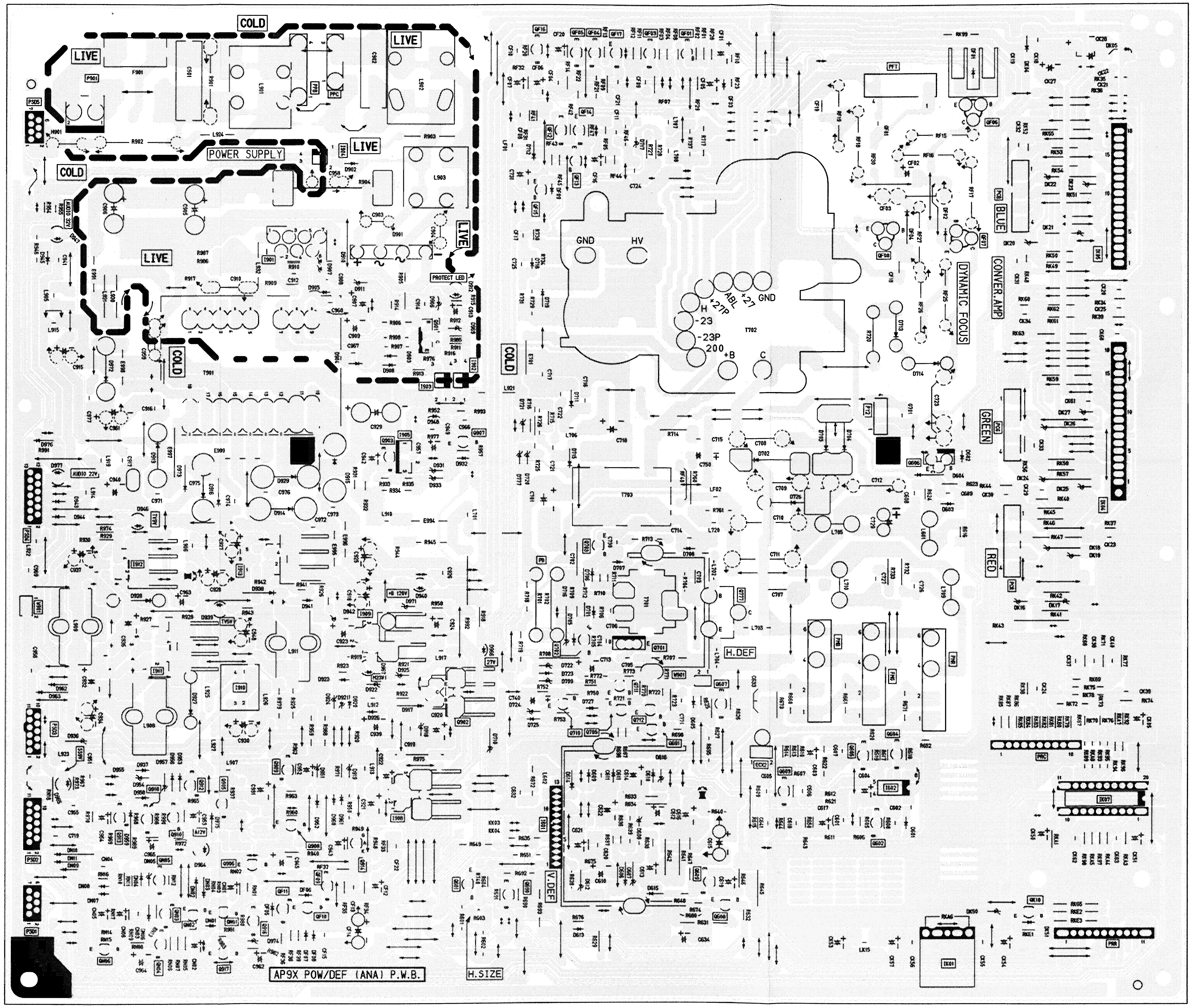
VIDEO CHROMA P.W.B.
TERMINAL P.W.B.

VM P.W.B.
3 LINE P.W.B.

PRINTED CIRCUIT BOARD

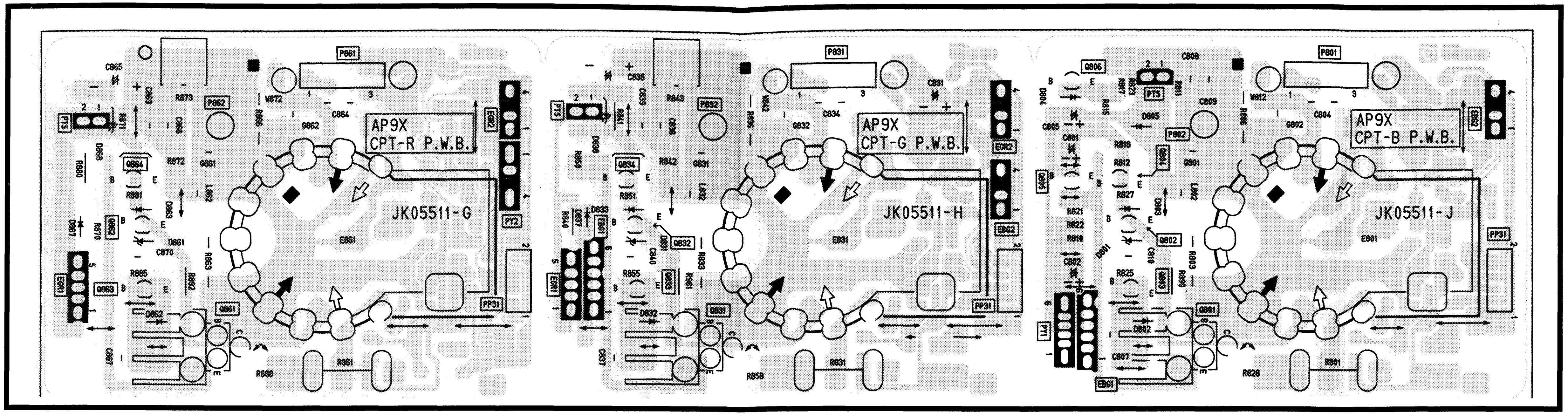

AP9X VIDEO CHROMA P.W.B.
JK05501-C
AP9X VM P.W.B.
JK05501-D
AP9X TERMINAL P.W.B.
JK05501-A
AP9X 3LINE P.W.B.
JK05501-E

PRINTED CIRCUIT BOARD

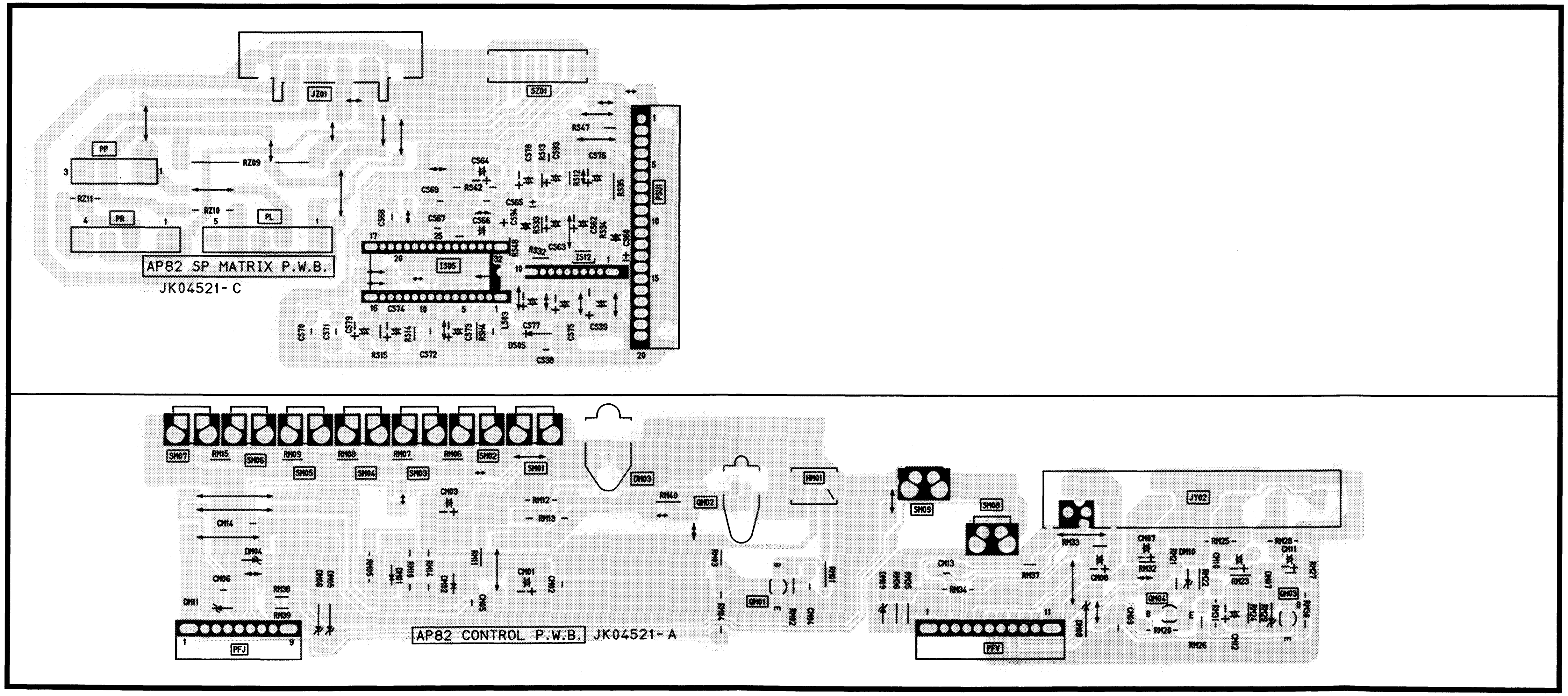

COLD
LIVE
POWER SUPPLY
PROTECT LED
AUDIO 22V
GND
HV
ABL
GND
BLUE
CONVER.AMP
DYNAMIC FOCUS
GREEN
RED
H.DEF
V.DEF
H.SIZE
AP9X POW/DEF (ANA) P.W.B.

CPT-R P.W.B. CPT-G P.W.B.
CPT-B P.W.B.

PRINTED CIRCUIT BOARD

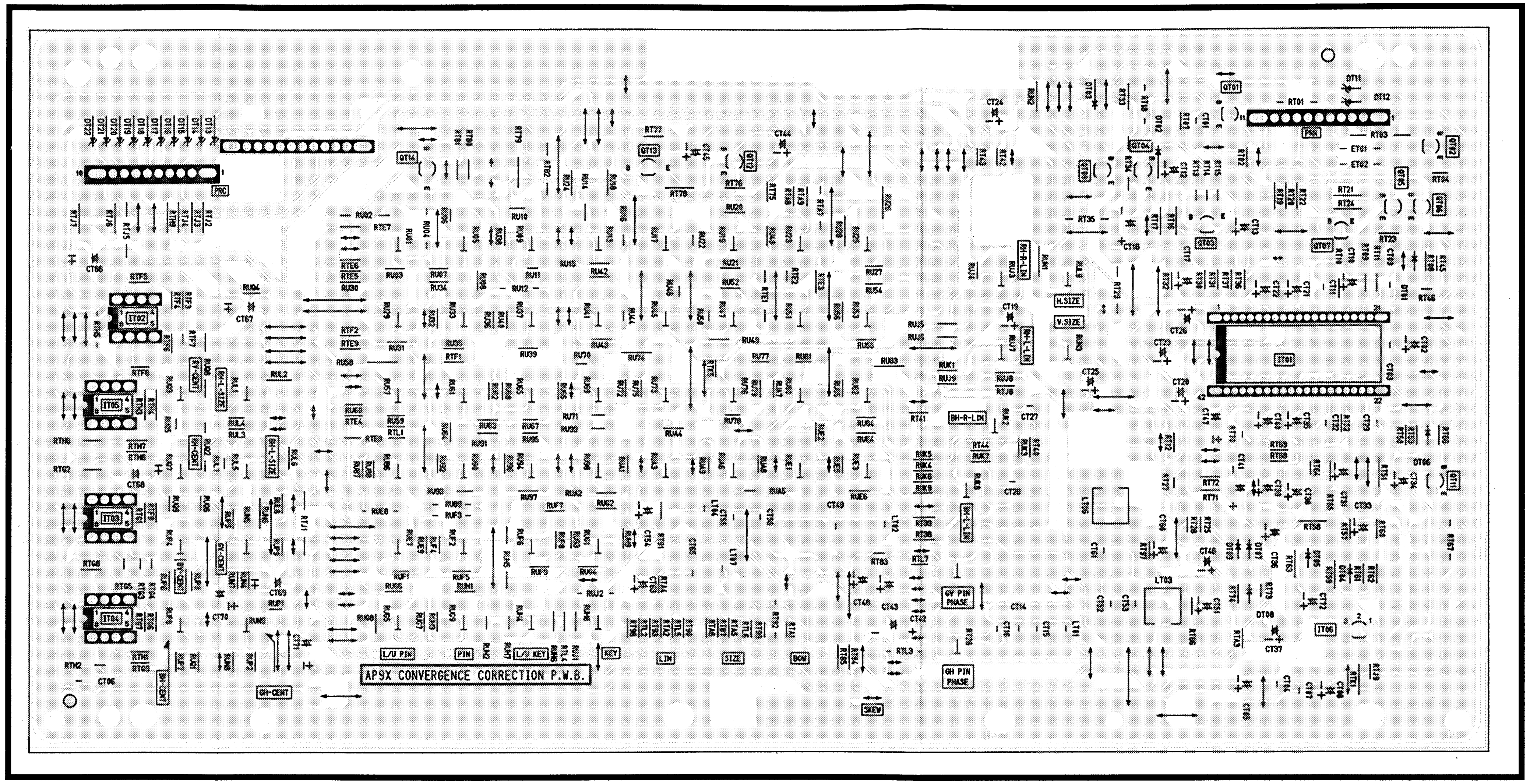

AP9X
CPT-R P.W.B.
JK05511-G
AP9X
CPT-G P.W.B.
JK05511-H
AP9X
CPT-B P.W.B.
JK05511-J

SP MATRIX P.W.B.
CONTROL P.W.B.

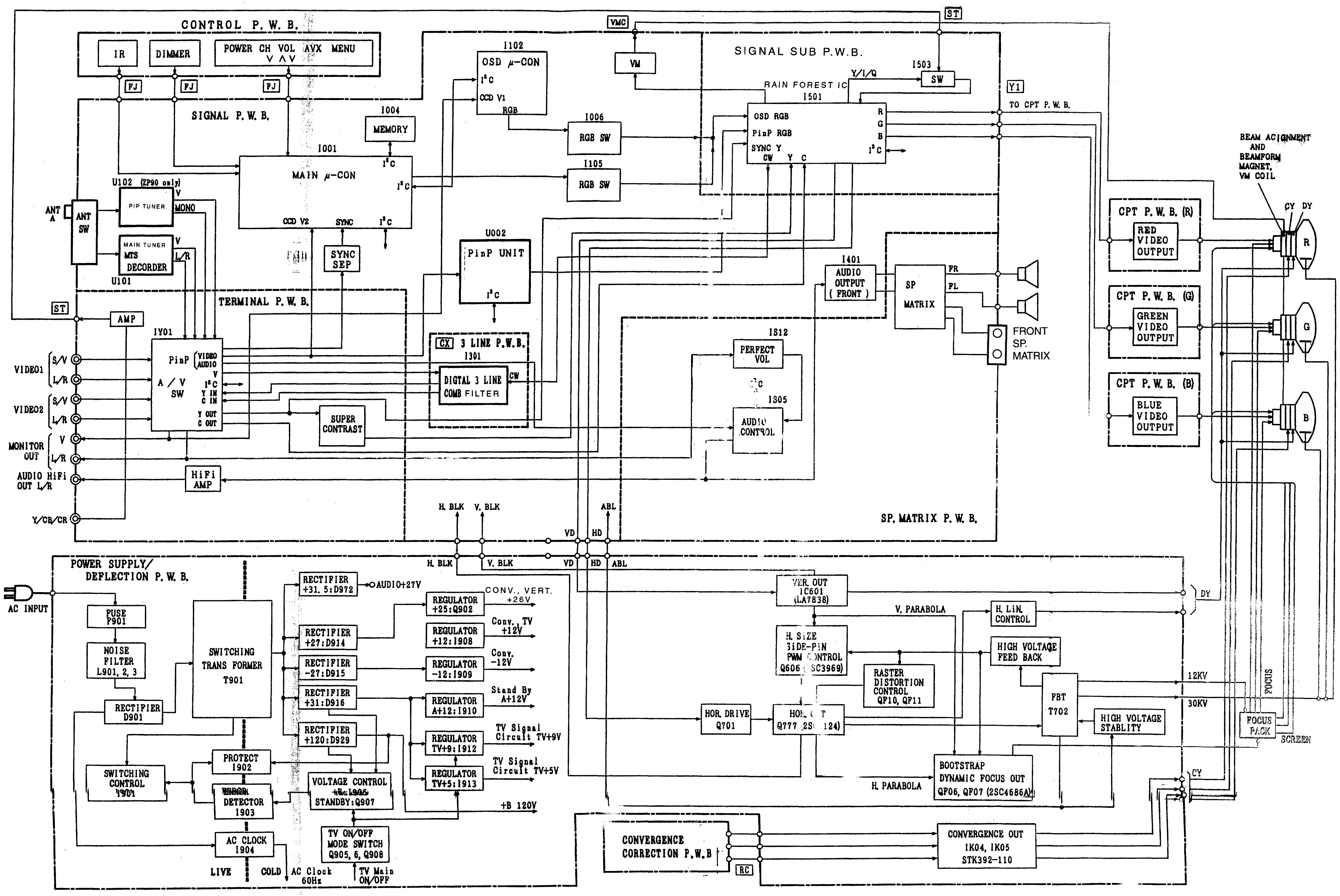

AP82 SP MATRIX P.W.B.
JK04521-C
AP82 CONTROL P.W.B. JK04521-A

PRINTED CIRCUIT BOARD

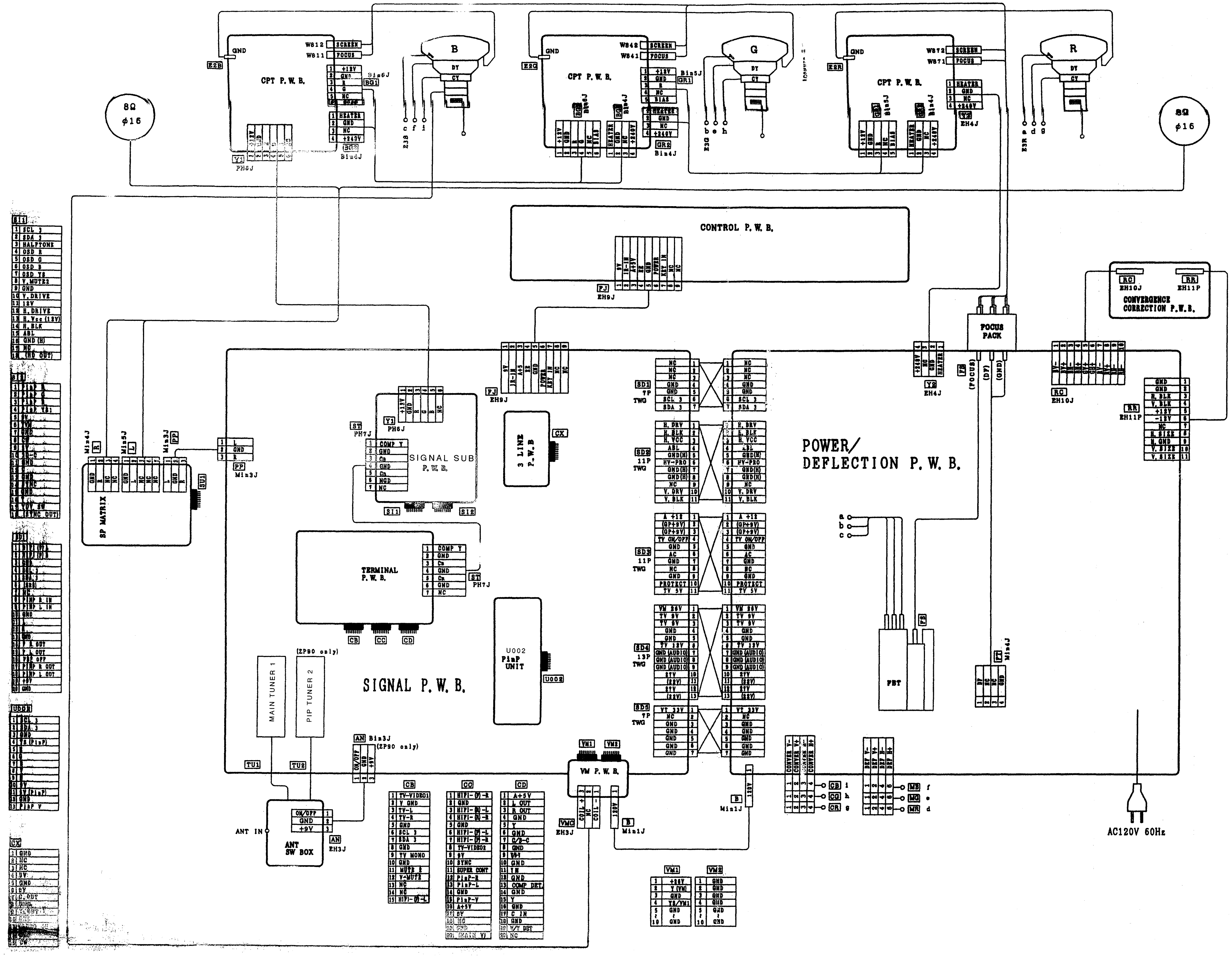
ANALOG CONVERGENCE CORRECTION P.W.B.


AP9X CONVERGENCE CORRECTION P.W.B.
PRC
PRR
IT01
IT02
IT03
IT04
IT05
IT06
QT01
QT03
QT04
QT07
QT13
QT14
L/U PIN
PIN
L/U KEY
KEY
LIN
SIZE
BOW
SKEW
GH-CENT
BH-CENT
BV-CENT
GV-CENT
BH-L-SIZE
BH-R-LIN
BH-L-LIN
H.SIZE
V.SIZE
GV PIN PHASE
GH PIN PHASE
LT03
LT06

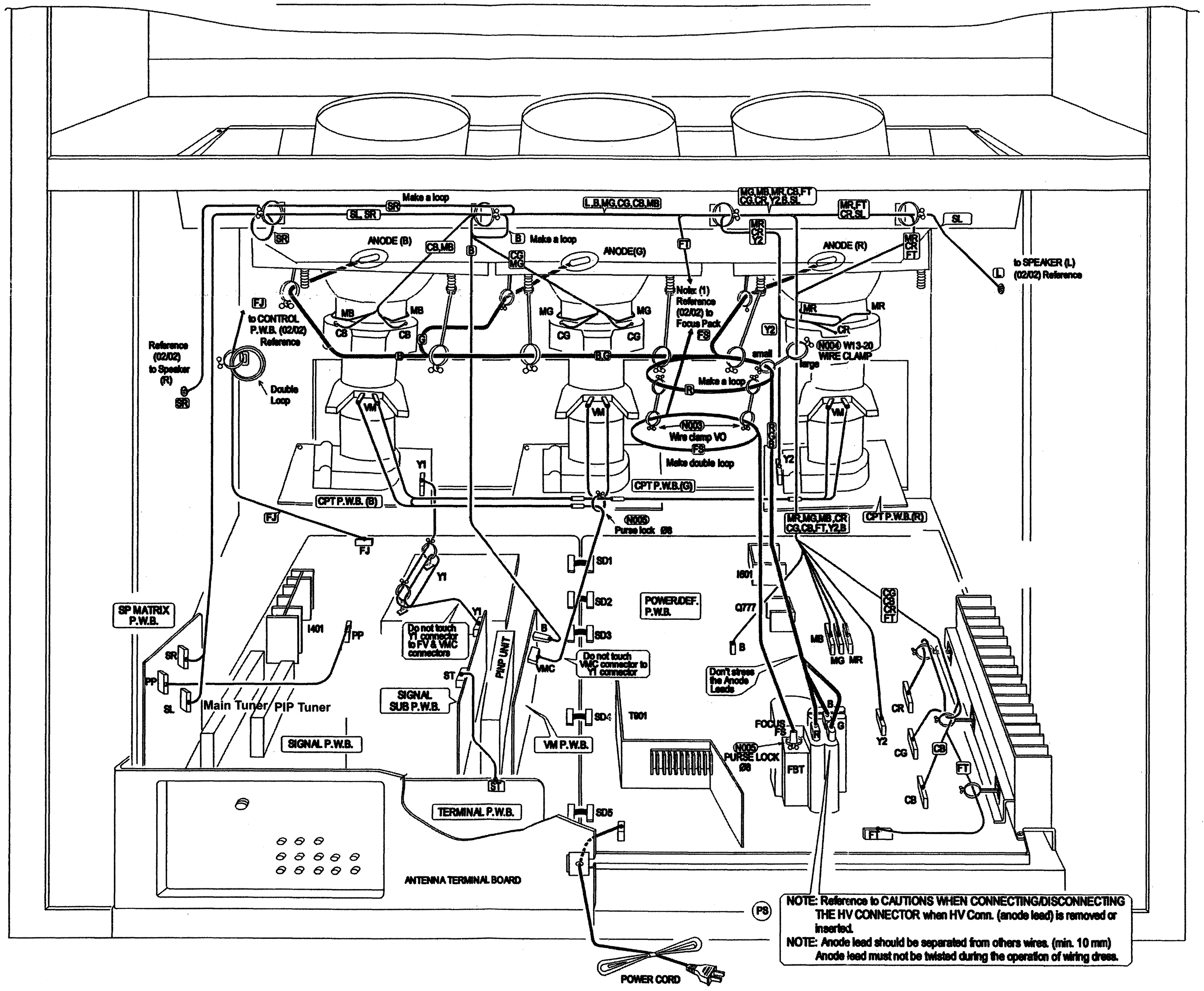
BLOCK DIAGRAM


CONTROL P. W. B.
IR
DIMMER
POWER CH VOL AVX MENU
V Λ V
FJ
FJ
FJ
VMC
ST
VM
1102
OSD μ-CON
I²C
CCD V1
RGB
SIGNAL SUB P.W.B.
1503
SW
Y/I/Q
RAIN FOREST IC
1501
Y1
TO CPT P. W. B.
OSD RGB
PinP RGB
SYNC Y
CW Y C
R
G
B
I²C
SIGNAL P. W. B.
1004
MEMORY
1006
RGB SW
1105
RGB SW
1001
MAIN μ-CON
I²C
I²C
CCD V2
SYNC
I²C
U102 (ZP90 only)
PIP TUNER
V
MONO
ANT A
ANT SW
MAIN TUNER
MTS DECORDER
V
L/R
U101
SYNC SEP
U002
PinP UNIT
I²C
1401
AUDIO OUTPUT (FRONT)
SP MATRIX
FR
FL
FRONT SP. MATRIX
BEAM ACIGNMENT AND BEAMFORM MAGNET, VM COIL
CY DY
CPT P. W. B. (R)
RED VIDEO OUTPUT
R
CPT P. W. B. (G)
GREEN VIDEO OUTPUT
G
CPT P. W. B. (B)
BLUE VIDEO OUTPUT
B
ST
AMP
TERMINAL P. W. B.
1Y01
PinP (VIDEO AUDIO
A / V SW
V
I²C
Y IN
C IN
Y OUT
C OUT
CX 3 LINE P.W.B.
1301
DIGTAL 3 LINE COMB FILTER
CW
1S12
PERFECT VOL
I²C
1S05
AUDIO CONTROL
SUPER CONTRAST
VIDEO1 S/V L/R
VIDEO2 S/V L/R
MONITOR OUT V L/R
AUDIO HiFi OUT L/R
HiFi AMP
Y/CB/CR
H. BLK V. BLK
ABL
VD HD
SP. MATRIX P. W. B.
POWER SUPPLY/ DEFLECTION P. W. B.
H. BLK
V. BLK
VD HD ABL
AC INPUT
FUSE F901
NOISE FILTER L901, 2, 3
RECTIFIER D901
SWITCHING TRANS FORMER T901
RECTIFIER +31. 5:D972
AUDIO+27V
CONV., VERT. +26V
REGULATOR +25:Q902
RECTIFIER +27:D914
Conv., TV +12V
REGULATOR +12:I908
RECTIFIER -27:D915
Conv. -12V
REGULATOR -12:I909
RECTIFIER +31:D916
Stand By A+12V
REGULATOR A+12:I910
RECTIFIER +120:D929
TV Signal Circuit TV+9V
REGULATOR TV+9:I912
TV Signal Circuit TV+5V
REGULATOR TV+5:I913
+B 120V
SWITCHING CONTROL I901
PROTECT I902
~~ERROR~~ DETECTOR I903
VOLTAGE CONTROL ~~+B:I905~~ STANDBY:Q907
AC CLOCK I904
TV ON/OFF MODE SWITCH Q905, 6, Q908
LIVE
COLD
AC Clock 60Hz
TV Main ON/OFF
VER. OUT IC601 (LA7838)
DY
V. PARABOLA
H. LIN. CONTROL
H. SIZE SIDE-PIN PWM CONTROL Q606 (2SC3969)
HIGH VOLTAGE FEED BACK
RASTER DISTORTION CONTROL QF10, QF11
12KV
FOCUS
HOR. DRIVE Q701
HOR. OUT Q777 (2SC5124)
FBT T702
30KV
HIGH VOLTAGE STABLITY
FOCUS PACK
SCREEN
H. PARABOLA
BOOTSTRAP DYNAMIC FOCUS OUT QF06, QF07 (2SC4686A)
CY
CONVERGENCE CORRECTION P.W.B
RC
CONVERGENCE OUT IK04, IK05 STK392-110

WIRING CONNECTION DIAGRAM


CPT P. W. B.
B
G
R
DY
CY
8Ω
φ16
CONTROL P. W. B.
FOCUS PACK
CONVERGENCE CORRECTION P.W.B.
SP MATRIX
SIGNAL SUB P. W. B.
3 LINE P. W. B
TERMINAL P. W. B.
U002 PinP UNIT
MAIN TUNER 1
PIP TUNER 2
SIGNAL P. W. B.
POWER/ DEFLECTION P. W. B.
FBT
VM P. W. B.
ANT SW BOX
ANT IN
AC120V 60Hz

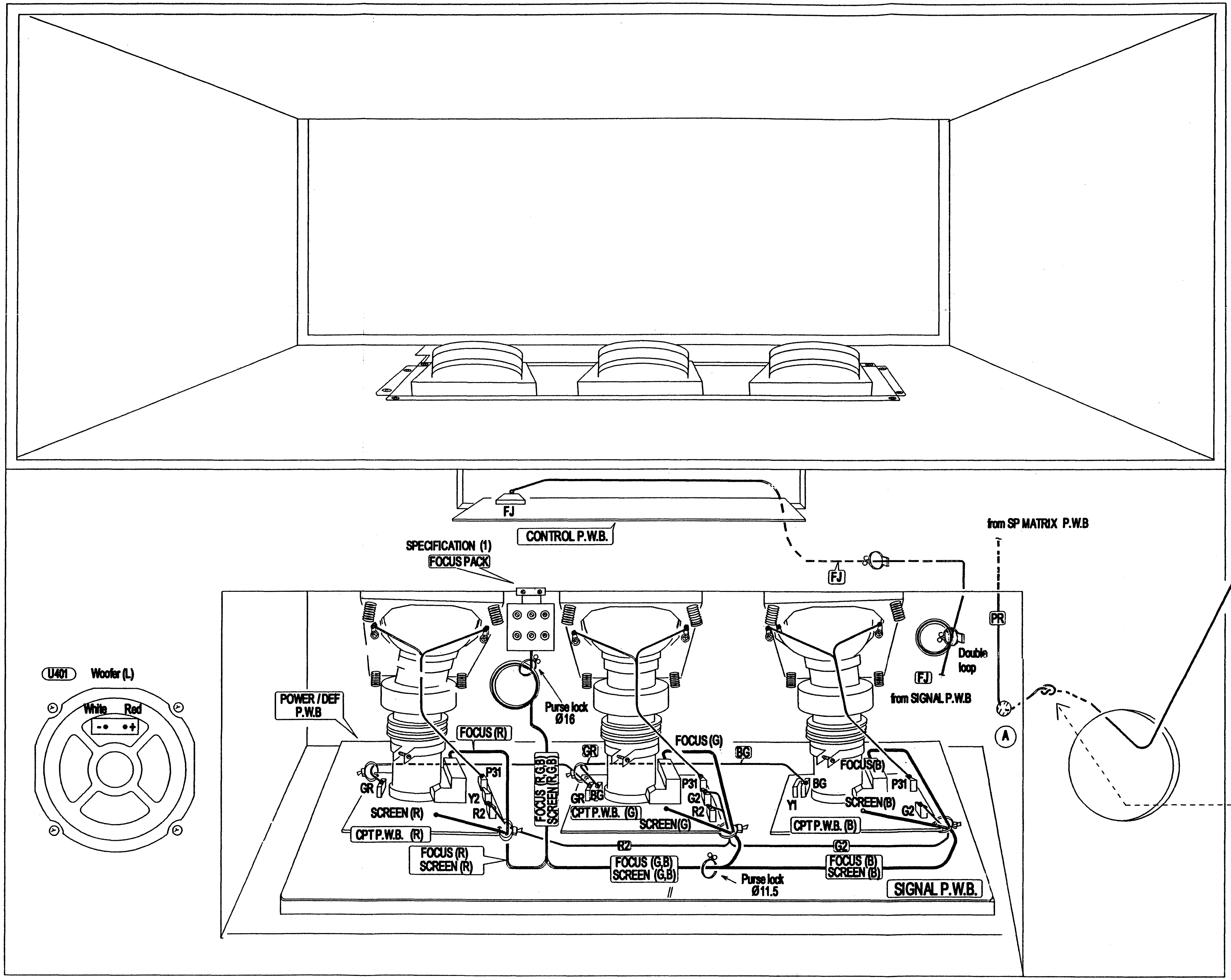
WIRING DRAWING

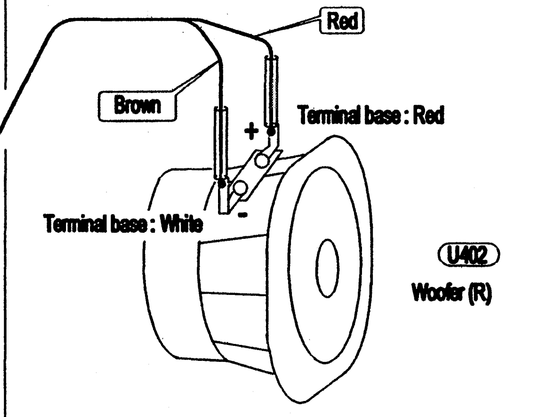

Make a loop
SR
SL, SR
SR
ANODE (B)
CB,MB
B
B Make a loop
CG MG
ANODE(G)
L,B,MG,CG,CB,MB
FT
MG,MB,MR,CB,FT CG,CR,Y2,B,SL
MR CR Y2
MR,FT CR,SL
SL
MR CR FT
ANODE (R)
L
to SPEAKER (L) (02/02) Reference
FJ
to CONTROL P.W.B. (02/02) Reference
Reference (02/02) to Speaker (R)
SR
Double Loop
MB
MB
CB
CB
G
B
B,G
MG
MG
CG
CG
Note: (1) Reference (02/02) to Focus Pack
FS
Y2
MR
MR
CR
N004 W13-20 WIRE CLAMP
small
large
Make a loop
R
N003
Wire clamp VO
FS
Make double loop
R G B
VM
VM
VM
Y1
Y2
CPT P.W.B. (B)
CPT P.W.B.(G)
CPT P.W.B.(R)
N005
Purse lock Ø8
MR,MG,MB,CR CG,CB,FT,Y2,B
FJ
FJ
Y1
Y1
SD1
SD2
SD3
SD4
SD5
POWER/DEF. P.W.B.
I601
Q777
B
SP MATRIX P.W.B.
SR
PP
SL
I401
PP
Main Tuner
PIP Tuner
SIGNAL P.W.B.
Do not touch Y1 connector to FV & VMC connectors
ST
SIGNAL SUB P.W.B.
PINP UNIT
B
VMC
Do not touch VMC connector to Y1 connector
VM P.W.B.
T901
Don't stress the Anode Leads
MB
MG
MR
CG CB CR FT
CR
Y2
CG
CB
CB
FT
FT
FOCUS FS
N005
PURSE LOCK Ø8
FBT
B
R
G
ST
TERMINAL P.W.B.
ANTENNA TERMINAL BOARD
PS
POWER CORD

NOTE: Reference to CAUTIONS WHEN CONNECTING/DISCONNECTING THE HV CONNECTOR when HV Conn. (anode lead) is removed or inserted.

NOTE: Anode lead should be separated from others wires. (min. 10 mm) Anode lead must not be twisted during the operation of wiring dress.

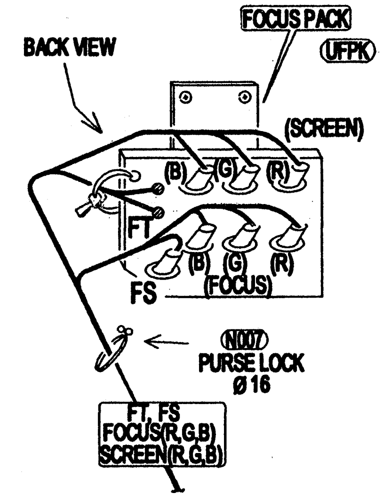
WIRING DRAWING


FJ
CONTROL P.W.B.
SPECIFICATION (1)
FOCUS PACK
FJ
from SP MATRIX P.W.B
PR
Double loop
FJ
from SIGNAL P.W.B
A
U401
Woofer (L)
White
Red
POWER / DEF P.W.B
Purse lock Ø16
FOCUS (R)
FOCUS (R,G,B)
SCREEN (R,G,B)
GR
FOCUS (G)
BG
FOCUS(B)
P31
GR
GR
BG
P31
BG
P31
Y2
G2
Y1
SCREEN(B)
G2
SCREEN (R)
R2
CPT P.W.B. (G)
R2
SCREEN(G)
CPT P.W.B. (B)
CPT P.W.B. (R)
R2
G2
FOCUS (R)
SCREEN (R)
FOCUS (G,B)
SCREEN (G,B)
FOCUS (B)
SCREEN (B)
Purse lock Ø11.5
SIGNAL P.W.B.

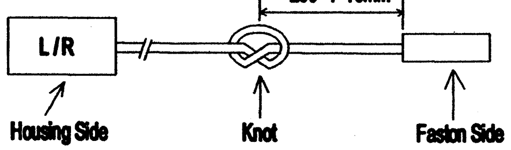

Red
Brown
Terminal base : Red
Terminal base : White
U402
Woofer (R)

SPECIFICATION

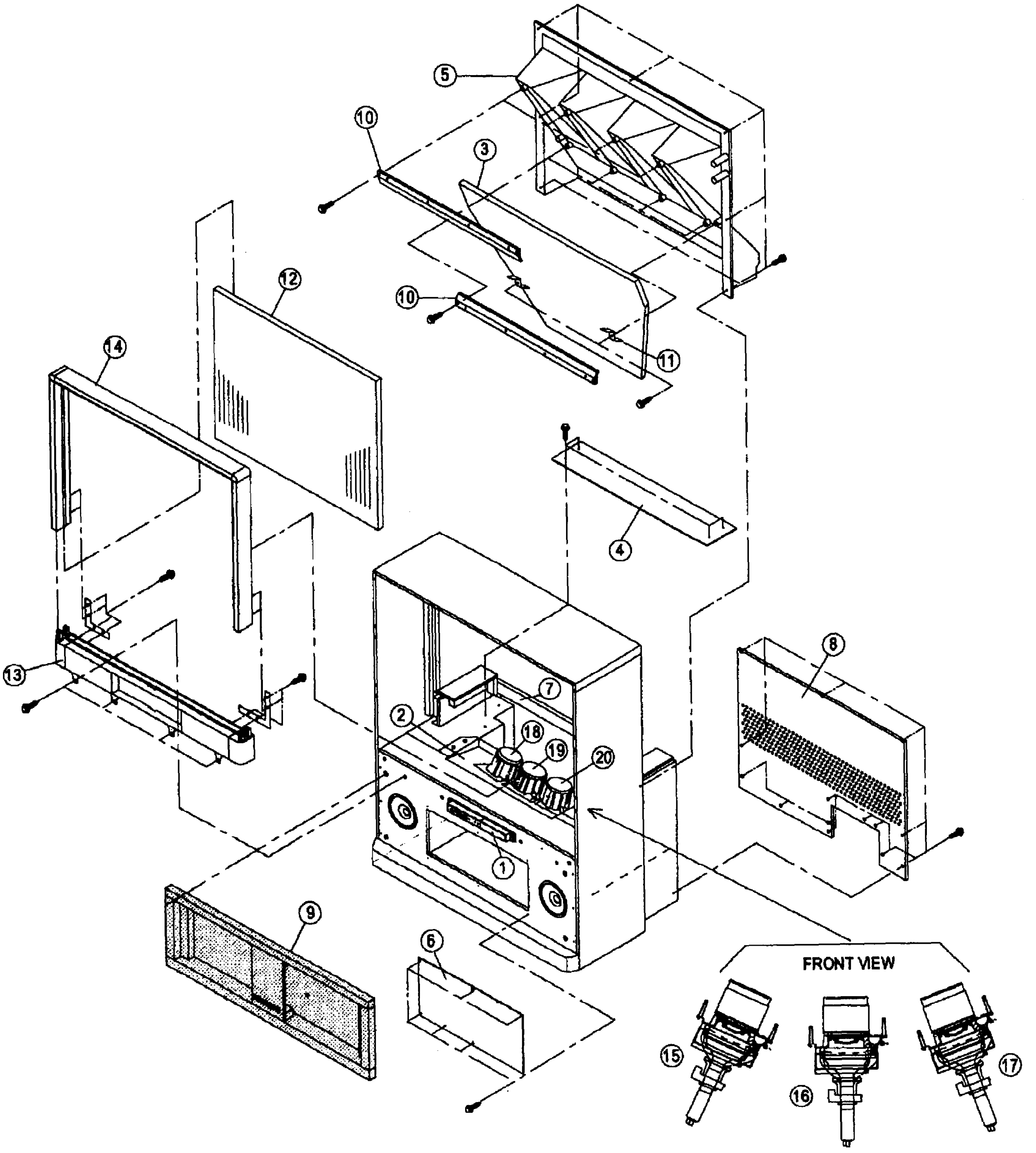
(1) Refer to figure below about assembly of FOCUS PACK leads.


FOCUS PACK
BACK VIEW
UFPK
(SCREEN)
(B)
(G)
(R)
FT
(B)
(G)
(R)
FS
(FOCUS)
N007
PURSE LOCK
Ø16
FT, FS
FOCUS(R,G,B)
SCREEN(R,G,B)

Make a knot as figure below after wires are through hole Ⓐ in cabinet.


250 +/- 10mm
L/R
Housing Side
Knot
Faston Side

EXPLODED VIEW



5
10
3
12
10
11
14
4
13
8
7
2
18
19
20
1
9
6
FRONT VIEW
15
16
17

NOTE: Refer to page 93 for description and parts list. Some parts may appear different than those shown in the Exploded View. When ordering, refer to the Replacement Parts List for correct part number. Since this Service Manual covers several models, use care to select the correct part for the model being serviced.

REPLACEMENT PARTS LIST

PRODUCT SERVICE NOTE: Components marked with a ⚠ have special characteristics important to safety. Before replacing any of these components, read carefully, the PRODUCT SAFETY NOTICE of this Service Manual. Don't degrade the safety of the receiver through improper servicing.

ABBREVIATIONS

Capacitors:

CD: Ceramic Disc
PF: Polyester Film
EL: Electrolytic
PP: Polypropylene
PR: Paper
TA: Tantalum
TM: Trimmer
MC: Mylar

Resistors:

CF: Carbon Film
CC: Carbon Composition
MF: Metal Oxide Film
VR: Variable Resistor
WW: Wire Wound
FR: Fuse Resistor
MG: Metal Glaze

Semiconductors:

TR: Transistor
DI: Diode
ZD: Zener Diode
VA: Varistor
TH: Thermistor
IC: Integrated Circuit

SYMBOL NO.	PART NO.	PART DESCRIPTION
		PWBs
B	JK05481	AP92 SIGNAL PWB P#1
B	JK05571	AP9* POWER.DEF.ANA.PWB P#1
B	JK05501	AP9* TERMINAL PWB P#1
B	JK05511	AP9* CPT PWB P#1
B	JK04521	AP8* SP MATRIX PWB #1
B	JK05551	AP9* CONVER CORR PWB P#1
		CAPACITORS
C002	0228758R	CAP 2125 CHIP 150PFJSL50V TAPE
C003	0246464R	CAP.-CERAMIC 100PF-J CH 50V TAPE
C004	0800299R	CAP.-ELECTRO. 22UF-M(SMG) 16V
C005	0893031R	CAP 2125CHIP 1000PFKB 50V TAPE
C015	0800291R	CAP.-ELECTRO. 10UF-M(SMG) 16V
C016	0228042R	CAP 2125CHIP 33PFJCH 50V TAPE
C017	0890121R	CAP.-CERAMIC 33PF-J CH 50V
C018	0800291R	CAP.-ELECTRO. 10UF-M(SMG) 16V
C019	0800282R	CAP.-ELECTORO. 2.2UF-M(SMG) 50V
C025	0893044R	CAP2125CHIP 10000PFKB 50V TAPE
C026	0893027R	CAP 2125 CHIP 100000PF-K B 25V TAPE
C029	0228758R	CAP 2125 CHIP 150PFJSL50V TAPE
C030	0284623R	CAP.-ELECTRO. 1UF-SME(BP) 50V
C031	0800279R	CAP.-ELECTORO. 1.0UF-M(SMG) 50V
C032	0800324R	CAP.-ELECTRO. 100UF-M(SMG) 6.3V
C033	0893053R	CAP2125CHIP 47000PFKB 50V TAPE
C034	0228756R	CAP2125CHIP 120PFJSL 50V TAPE
C035	0800291R	CAP.-ELECTRO. 10UF-M(SMG) 16V
C036	0800358R	CAP.-ELECTRO. 1000UF-M 6.3V
C037	0893027R	CAP 2125 CHIP 100000PF-K B 25V TAPE
C040	0800353R	CAP.-ELECTRO.470UF-M 16V
C041	AN00637R	CAP.POLYESTER 0.1UF 50V TAPE
C042	0800291R	CAP.-ELECTRO. 10UF-M(SMG) 16V
C043	0800351R	CAP.-ELECTRO. 470UF-M 6.3V
C044	0893053R	CAP2125CHIP 47000PFKB 50V TAPE
C045	0893027R	CAP 2125 CHIP 100000PF-K B 25V TAPE
C046	0893048R	CAP2125CHIP 22000PFKB 50V TAPE
C053	0893027R	CAP 2125 CHIP 100000PF-K B 25V TAPE
C054	0800326R	CAP.-ELECTRO. 100UF-M 16V
C057	0800279R	CAP.-ELECTORO. 1.0UF-M(SMG) 50V
C061	0800279R	CAP.-ELECTORO. 1.0UF-M(SMG) 50V
C064	0800326R	CAP.-ELECTRO. 100UF-M 16V
C065	0800291R	CAP.-ELECTRO. 10UF-M(SMG) 16V
C067	0800291R	CAP.-ELECTRO. 10UF-M(SMG) 16V
C068	0800317R	CAP.-ELECTRO. 47UF-M(SMG) 16V
C070	AN00637R	CAP.POLYESTER 0.1UF 50V TAPE
C071	AN00637R	CAP.POLYESTER 0.1UF 50V TAPE
C075	0893031R	CAP 2125CHIP 1000PFKB 50V TAPE
C076	0228756R	CAP2125CHIP 120PFJSL 50V TAPE
C101	0800326R	CAP.-ELECTRO. 100UF-M 16V
C102	0800326R	CAP.-ELECTRO. 100UF-M 16V(AP91)
C103	0893053R	CAP2125CHIP 47000PFKB 50V TAPE(AP91)
C104	0800358R	CAP.-ELECTRO. 1000UF-M 6.3V(AP91)
C105	0800361N	CAP.-ELECTRO 1000UF 16V(AP91)
C106	0800358R	CAP.-ELECTRO. 1000UF-M 6.3V
C107	0893053R	CAP2125CHIP 47000PFKB 50V TAPE
C108	0800361N	CAP.-ELECTRO 1000UF 16V
C109	0800361N	CAP.-ELECTRO 1000UF 16V
C110	0800291R	CAP.-ELECTRO. 10UF-M(SMG) 16V
C111	0800326R	CAP.-ELECTRO. 100UF-M 16V(AP91)
C112	AN00624R	CAP.POLYESTER 0.01UF 50V TAPE
C113	0893027R	CAP 2125 CHIP 100000PF-K B 25V TAPE
C114	0800359R	CAP.-ELECTRO. 1000UF-M 10V
C115	0893027R	CAP 2125 CHIP 100000PF-K B 25V TAPE
C116	0800361N	CAP.-ELECTRO 1000UF 16V
C119	0800279R	CAP.-ELECTORO. 1.0UF-M(SMG) 50V
C11A	0228770R	CAP. MINI-CHIP 470PF-J SL 50V TAPE
C120	AN00637R	CAP.POLYESTER 0.1UF 50V TAPE

REPLACEMENT PARTS LIST

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SYMBOL NO.	PART NO.	PART DESCRIPTION	SYMBOL NO.	PART NO.	PART DESCRIPTION
C121	0228756R	CAP2125CHIP 120PFJSL 50V TAPE	C408	0800318R	CAP.-ELECTRO. 47UF-M 25V
C122	0893053R	CAP2125CHIP 47000PFKB 50V TAPE	C409	0800318R	CAP.-ELECTRO. 47UF-M 25V
C123	0800324R	CAP.-ELECTRO. 100UF-M(SMG) 6.3V	C410	0800327R	CAP.-ELECTRO. 100UF-M 25V
C124	0800324R	CAP.-ELECTRO. 100UF-M(SMG) 6.3V	C411	0800279R	CAP.-ELECTORO. 1.0UF-M(SMG) 50V
C125	0893053R	CAP2125CHIP 47000PFKB 50V TAPE	C412	0800279R	CAP.-ELECTORO. 1.0UF-M(SMG) 50V
C126	0228746R	CAP 2125 CHIP 47PFJSL 50V TAPE	C413	0800327R	CAP.-ELECTRO. 100UF-M 25V
C127	0228038R	CAP 2125CHIP 22PFJCH 50V TAPE	C414	0800317R	CAP.-ELECTRO. 47UF-M(SMG) 16V
C128	0800279R	CAP.-ELECTORO. 1.0UF-M(SMG) 50V	C415	AN00637R	CAP.POLYESTER 0.1UF 50V TAPE
C132	0893053R	CAP2125CHIP 47000PFKB 50V TAPE	C416	0284824F	CAP.-ELECTRO. 2200UF 35V SMG
C136	0800326R	CAP.-ELECTRO. 100UF-M 16V	C417	0880198R	CAP.-PLOY. 0.22UF-J 50V
C137	0893053R	CAP2125CHIP 47000PFKB 50V TAPE	C418	0880198R	CAP.-PLOY. 0.22UF-J 50V
C138	0228770R	CAP. MINI-CHIP 470PF-J SL 50V TAPE(AP91)	C419	0284824F	CAP.-ELECTRO. 2200UF 35V SMG
C139	0893027R	CAP 2125 CHIP 100000PF-K B 25V TAPE(AP91)	C420	0284824F	CAP.-ELECTRO. 2200UF 35V SMG
C140	0800361N	CAP.-ELECTRO 1000UF 16V	C424	AN00637R	CAP.POLYESTER 0.1UF 50V TAPE
C141	AN00637R	CAP.POLYESTER 0.1UF 50V TAPE	C426	AN00637R	CAP.POLYESTER 0.1UF 50V TAPE
C142	0893027R	CAP 2125 CHIP 100000PF-K B 25V TAPE	C427	AN00637R	CAP.POLYESTER 0.1UF 50V TAPE
C143	0890084R	CAP.-CERAMIC 560PF-K 50V	C428	0893027R	CAP 2125 CHIP 100000PF-K B 25V TAPE
C1C1	0800288R	CAP.-ELECTRO. 4.7UF-M(SMG) 50V	C451	0880198R	CAP.-PLOY. 0.22UF-J 50V
C201	0800317R	CAP.-ELECTRO. 47UF-M(SMG) 16V(AP90)	C456	0893027R	CAP 2125 CHIP 100000PF-K B 25V TAPE
C202	0228040R	CAP 2125CHIP 27PFJCH 50V TAPE(AP90)	C457	0893027R	CAP 2125 CHIP 100000PF-K B 25V TAPE
C203	0228008R	CAP 2125 CHIP 8PF-C CH 50V TAPE(AP90)	C458	0893027R	CAP 2125 CHIP 100000PF-K B 25V TAPE
C204	0228034R	CAP 2125 CHIP 15PF-J CH 50V TAPE(AP90)	C459	0893027R	CAP 2125 CHIP 100000PF-K B 25V TAPE
C205	0800277R	CAP.-ELECTORO. 0.47UF-M 50V(AP90)	C504	0800299R	CAP.-ELECTRO. 22UF-M(SMG) 16V
C206	0893044R	CAP2125CHIP 10000PFKB 50V TAPE(AP90)	C507	0228048R	CAP MINI-CHIP 56PF-J CH 50V TAPE
C207	0893044R	CAP2125CHIP 10000PFKB 50V TAPE(AP90)	C508	0893044R	CAP2125CHIP 10000PFKB 50V TAPE
C208	0893044R	CAP2125CHIP 10000PFKB 50V TAPE(AP90)	C509	0890058R	CAP.-CERAMIC 8PF-50V
C209	0800334R	CAP.-ELECTRO. 220UF 10V(AP90)	C510	0800326R	CAP.-ELECTRO. 100UF-M 16V
C210	0893044R	CAP2125CHIP 10000PFKB 50V TAPE(AP90)	C511	0228708R	CAP MINI-CHIP 8PF-C SL 50V TAPE
C212	0228056R	CAP 2125 CHIP 120PFJCH 50V TAPE(AP90)	C512	0800291R	CAP.-ELECTRO. 10UF-M(SMG) 16V
C213	0228760R	CAP 2125 CHIP 180PFJSL 50V TAPE(AP90)	C513	AN00637R	CAP.POLYESTER 0.1UF 50V TAPE
C214	0893044R	CAP2125CHIP 10000PFKB 50V TAPE(AP90)	C514	0893044R	CAP2125CHIP 10000PFKB 50V TAPE
C215	0893044R	CAP2125CHIP 10000PFKB 50V TAPE(AP90)	C515	0893044R	CAP2125CHIP 10000PFKB 50V TAPE
C216	0893044R	CAP2125CHIP 10000PFKB 50V TAPE(AP90)	C516	AN00637R	CAP.POLYESTER 0.1UF 50V TAPE
C217	0800325R	CAP.-ELECTRO. 100UF-M 10V(AP90)	C517	AN00637R	CAP.POLYESTER 0.1UF 50V TAPE
C218	0893044R	CAP2125CHIP 10000PFKB 50V TAPE(AP90)	C518	0800279R	CAP.-ELECTORO. 1.0UF-M(SMG) 50V
C219	0228040R	CAP 2125CHIP 27PFJCH 50V TAPE(AP90)	C519	0800282R	CAP.-ELECTORO. 2.2UF-M(SMG) 50V
C220	0228040R	CAP 2125CHIP 27PFJCH 50V TAPE(AP90)	C520	0228032R	CAP 2125CHIP 12PFJCH 50V TAPE
C221	0800326R	CAP.-ELECTRO. 100UF-M 16V(AP90)	C521	AN00615R	CAP.POLYESTER 0.0022UF 50V TAPE
C222	0284647R	CAP.-ELECTRO.22UF-SME(BP) 16V(AP90)	C522	0800273R	CAP.-ELECTRO 0.22UF-M 50V
C223	0228048R	CAP MINI-CHIP 56PF-J CH 50V TAPE(AP90)	C523	0800326R	CAP.-ELECTRO. 100UF-M 16V
C224	0228048R	CAP MINI-CHIP 56PF-J CH 50V TAPE(AP90)	C524	0800326R	CAP.-ELECTRO. 100UF-M 16V
C225	0800291R	CAP.-ELECTRO. 10UF-M(SMG) 16V(AP90)	C525	0893044R	CAP2125CHIP 10000PFKB 50V TAPE
C226	0893044R	CAP2125CHIP 10000PFKB 50V TAPE(AP90)	C526	0893044R	CAP2125CHIP 10000PFKB 50V TAPE
C227	0800326R	CAP.-ELECTRO. 100UF-M 16V(AP90)	C527	0800326R	CAP.-ELECTRO. 100UF-M 16V
C228	0893044R	CAP2125CHIP 10000PFKB 50V TAPE(AP90)	C528	0284638R	CAP.-ELECTRO. 10UF-SME(BP) 16V
C229	0800326R	CAP.-ELECTRO. 100UF-M 16V(AP90)	C529	0800282R	CAP.-ELECTORO. 2.2UF-M(SMG) 50V
C230	0800325R	CAP.-ELECTRO. 100UF-M 10V(AP90)	C530	0893044R	CAP2125CHIP 10000PFKB 50V TAPE
C3A2	AN00637R	CAP.POLYESTER 0.1UF 50V TAPE	C531	0893044R	CAP2125CHIP 10000PFKB 50V TAPE
C3A3	AN00624R	CAP.POLYESTER 0.01UF 50V TAPE	C532	AN00637R	CAP.POLYESTER 0.1UF 50V TAPE
C401	0800291R	CAP.-ELECTRO. 10UF-M(SMG) 16V	C533	AN00637R	CAP.POLYESTER 0.1UF 50V TAPE
C402	0284623R	CAP.-ELECTRO. 1UF-SME(BP) 50V	C534	AN00637R	CAP.POLYESTER 0.1UF 50V TAPE
C403	0284623R	CAP.-ELECTRO. 1UF-SME(BP) 50V	C535	0800353R	CAP.-ELECTRO.470UF-M 16V
C404	0800279R	CAP.-ELECTORO. 1.0UF-M(SMG) 50V	C536	AN00628R	CAP.POLYESTER 0.022UF 50V TAPE
C405	0800279R	CAP.-ELECTORO. 1.0UF-M(SMG) 50V	C537	AN00637R	CAP.POLYESTER 0.1UF 50V TAPE
C406	0893031R	CAP 2125CHIP 1000PFKB 50V TAPE	C538	0800282R	CAP.-ELECTORO. 2.2UF-M(SMG) 50V
C407	0893031R	CAP 2125CHIP 1000PFKB 50V TAPE	C539	AN00637R	CAP.POLYESTER 0.1UF 50V TAPE

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SYMBOL NO.	PART NO.	PART DESCRIPTION	SYMBOL NO.	PART NO.	PART DESCRIPTION
C540	AN00637R	CAP.POLYESTER 0.1UF 50V TAPE	C715	AJ00134	CAPACITOR CERAMIC 1000P DC2K-R
C541	AN00637R	CAP.POLYESTER 0.1UF 50V TAPE	C717	0243503R	CAP.-CERAMIC 150PF-K B 500V
C542	0893044R	CAP2125CHIP 10000PFKB 50V TAPE	C718	AL00042	CAP.ELECTRO 33UF 350V
C543	0893044R	CAP2125CHIP 10000PFKB 50V TAPE	C719	0880198R	CAP.-PLOY. 0.22UF-J 50V
C544	0800335R	CAP.-ELECTRO. 220UF-M(SMG) 16V	C721	0243511R	CAP.-CERAMIC 680PF-K 500V TAPE
C545	AN00637R	CAP.POLYESTER 0.1UF 50V TAPE	C722	0243511R	CAP.-CERAMIC 680PF-K 500V TAPE
C546	0800326R	CAP.-ELECTRO. 100UF-M 16V	C723	AN01137F	METALLIZ POLY FILM CAPACITOR0.01UF
C547	0893027R	CAP 2125 CHIP 100000PF-K B 25V TAPE	C724	0279693R	CAP.-POLYESTER FLM 0.1UF
C548	0228754R	CAP2125CHIP 100PFJSL 50V TAPE	C725	0890087R	CAP.-CERAMIC 1000PF-K 50V
C549	0228754R	CAP2125CHIP 100PFJSL 50V TAPE	C726	0243508R	CAPACITOR-CERAMIC 390PF-K 500V
C550	AN00637R	CAP.POLYESTER 0.1UF 50V TAPE	C727	0244501R	CAP.-CERAMIC 1000PF-K 500V
C551	AN00637R	CAP.POLYESTER 0.1UF 50V TAPE	C729	0259471	CAP.-ELECTRO 6.8UF-M (BP) 50V
C552	AN00637R	CAP.POLYESTER 0.1UF 50V TAPE	C730	0244109R	CAPACITOR-CERAMIC 4700PF-KB 50V
C553	AN00637R	CAP.POLYESTER 0.1UF 50V TAPE	C731	0800329R	CAP.-ELECTRO. 100UF-M(SMG) 50V
C554	AN00637R	CAP.POLYESTER 0.1UF 50V TAPE	C740	0284667R	CAP.-ELECTRO. 47UF-MBPR(SME)16V
C555	0800326R	CAP.-ELECTRO. 100UF-M 16V	C750	0284634R	CAP.-ELECTRO 4.7UF-SME(BP) 50V
C556	0893044R	CAP2125CHIP 10000PFKB 50V TAPE	C771	0890084R	CAP.-CERAMIC 560PF-K 50V
C557	AN00637R	CAP.POLYESTER 0.1UF 50V TAPE	C801	0800317R	CAP.-ELECTRO. 47UF-M(SMG) 16V
C558	0800291R	CAP.-ELECTRO. 10UF-M(SMG) 16V	C802	0800326R	CAP.-ELECTRO. 100UF-M 16V
C601	AN00626R	CAP.POLYESTER 0.015UF 50V TAPE	C804	AJ00559	CAPACITOT CERAMIC 2200PF2KV
C602	AN00637R	CAP.POLYESTER 0.1UF 50V TAPE	C805	0800326R	CAP.-ELECTRO. 100UF-M 16V
C603	AL01326R	AL ELECT. CAP PW(4.7UF 50V)	C807	0890087R	CAP.-CERAMIC 1000PF-K 50V
C604	0800326R	CAP.-ELECTRO. 100UF-M 16V	C808	0890084R	CAP.-CERAMIC 560PF-K 50V
C605	AN00619R	CAP.POLYESTER 0.0047UF 50V TAPE	C810	AN00624R	CAP.POLYESTER 0.01UF 50V TAPE
C606	AN00624R	CAP.POLYESTER 0.01UF 50V TAPE	C831	AL00037R	ALUMINIUM ELECTROLYTIC CAP(33UF350V)
C607	0880198R	CAP.-PLOY. 0.22UF-J 50V	C834	AJ00559	CAPACITOT CERAMIC 2200PF2KV
C608	0244501R	CAP.-CERAMIC 1000PF-K 500V	C835	0800326R	CAP.-ELECTRO. 100UF-M 16V
C609	0244501R	CAP.-CERAMIC 1000PF-K 500V	C837	0890087R	CAP.-CERAMIC 1000PF-K 50V
C610	0800345R	CAP.-ELECTRO. 330UF-M(SMG) 25V	C838	0890084R	CAP.-CERAMIC 560PF-K 50V
C611	AN00631R	CAP.POLYESTER 0.033UF 50V TAPE	C839	0890071R	CAP.-CERAMIC 56PF-J 50V
C613	AL01157R	AL ELEC CAP(1UF 50V)	C840	AN00624R	CAP.POLYESTER 0.01UF 50V TAPE
C614	0800347N	CAP.-ELECTRO. 330UF-M(SMG) 50V	C864	AJ00559	CAPACITOT CERAMIC 2200PF2KV
C615	AL01143S	AL ELEC CAP(2200UF 25V)	C865	0800326R	CAP.-ELECTRO. 100UF-M 16V
C616	AL01336R	AL ELECT. CAP PW(10UF 16V)	C867	0890087R	CAP.-CERAMIC 1000PF-K 50V
C617	AL01297R	AL ELECT. CAP PW(1UF 50V)	C868	0890083R	CAP.-CERAMIC 470PF-K 50V
C619	0800317R	CAP.-ELECTRO. 47UF-M(SMG) 16V	C870	AN00624R	CAP.POLYESTER 0.01UF 50V TAPE
C620	AN00624R	CAP.POLYESTER 0.01UF 50V TAPE	⚠ C901	AN01445S	ACROSS CAPA 0.22UF 250V RE224
C621	0298261R	CAP.-TANTALUM 1MF-J 35V	⚠ C902	AN01443S	ACROSS CAPA 0.1UF 250V RE104
C622	0800347N	CAP.-ELECTRO. 330UF-M(SMG) 50V	C903	AJ00195F	CAPACITOR CERAMIC 4700P 250V F
C632	AN00624R	CAP.POLYESTER 0.01UF 50V TAPE	C904	AJ00195F	CAPACITOR CERAMIC 4700P 250V F
C633	0279693R	CAP.-POLYESTER FLM 0.1UF	C905	0284296	CAP.ELECTRO 680UF-M 250V(KMH)
C641	0244105R	CAP.-CERAMIC 2200PF-K 50V TAPE	C906	0284296	CAP.ELECTRO 680UF-M 250V(KMH)
C701	0251771	CAP.-ELECTRO 220UF-M 160V	C907	0800328R	CAP. ELECTRO. 100UF-M 35V
C702	0299926F	CAPACITOR-POLYESTER FILM 0.1UF-K 200V	C908	0890087R	CAP.-CERAMIC 1000PF-K 50V
C703	0890028M	CAP.-CERAMIC 330PF-K B 50V CYLINDRICAL	C909	0800332N	CAP.-ELECTRO. 100UF-M 100V
C704	0244109R	CAPACITOR-CERAMIC 4700PF-KB 50V	C910	0299977F	CAP-POLY FILM 0.0047UF-F 630V
C705	0243507R	CAP.-CERAMIC 330PF-K 500V TAPE	C912	0890085R	CAP.-CERAMIC 680PF-K 50V
C706	0244501R	CAP.-CERAMIC 1000PF-K 500V	C913	0800282R	CAP.-ELECTORO. 2.2UF-M(SMG) 50V
C707	AJ00134	CAPACITOR CERAMIC 1000P DC2K-R	C914	AN00637R	CAP.POLYESTER 0.1UF 50V TAPE
⚠ C708	AN01128F	METALLIZ POLY FILM CAP 0.0047UF	C915	AL00796S	CAP.EL.S-LEAD 1200UF-M(LXV) 35V
⚠ C709	AN01134F	METALLIZ POLY FILM CAP 0.0075UF	C916	AN00624R	CAP.POLYESTER 0.01UF 50V TAPE
C710	0299932F	CAP.-POLYPRO. 0.33UF-K 200V	C917	0244105R	CAP.-CERAMIC 2200PF-K 50V TAPE
C711	0299932F	CAP.-POLYPRO. 0.33UF-K 200V	C918	AL00796S	CAP.EL.S-LEAD 1200UF-M(LXV) 35V
⚠ C712	0299707F	CAP.-POLYESTOR 0.015UF-K 630V	C919	0880198R	CAP.-PLOY. 0.22UF-J 50V
C713	0800277R	CAP.-ELECTORO. 0.47UF-M 50V	C920	0800328R	CAP. ELECTRO. 100UF-M 35V
C714	AN00628R	CAP.POLYESTER 0.022UF 50V TAPE	C921	0800328R	CAP. ELECTRO. 100UF-M 35V

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SYMBOL NO.	PART NO.	PART DESCRIPTION	SYMBOL NO.	PART NO.	PART DESCRIPTION
C922	0800326R	CAP.-ELECTRO. 100UF-M 16V	CA73	0284623R	CAP.-ELECTRO. 1UF-SME(BP) 50V
C923	0800328R	CAP. ELECTRO. 100UF-M 35V	CA74	0893027R	CAP 2125 CHIP 100000PF-K B 25V TAPE
C924	0800335R	CAP.-ELECTRO. 220UF-M(SMG) 16V	CA75	0800279R	CAP.-ELECTORO. 1.0UF-M(SMG) 50V
C925	AL00796S	CAP.EL.S-LEAD 1200UF-M(LXV) 35V	CA76	0800279R	CAP.-ELECTORO. 1.0UF-M(SMG) 50V
C926	0880198R	CAP.-PLOY. 0.22UF-J 50V	CA82	0800291R	CAP.-ELECTRO. 10UF-M(SMG) 16V
C927	AL00796S	CAP.EL.S-LEAD 1200UF-M(LXV) 35V	CA83	0800286R	CAP.-ELECTRO. 4.7UF-M(SMG) 25V
C928	AL00796S	CAP.EL.S-LEAD 1200UF-M(LXV) 35V	CC02	0893044R	CAP2125CHIP 10000PFKB 50V TAPE
C929	0251703	CAP.ELECTRO 390UF-M 160V(KMH)	CC03	0893044R	CAP2125CHIP 10000PFKB 50V TAPE
C930	AL00793S	CAP.EL.S-LEAD 1200UF-M(LXV) 16V	CE01	0800354R	CAP.-ELECTRO. 470UF-M 25V
C931	0800353R	CAP.-ELECTRO.470UF-M 16V	CE02	AN00624R	CAP.POLYESTER 0.01UF 50V TAPE
C935	0800355N	CAP.ELECTRO. 470UF-M 35V	CE03	0800317R	CAP.-ELECTRO. 47UF-M(SMG) 16V
C937	AL00792S	CAP.-EL.S-LEAD 2200UF-M(LXV) 10V	CE04	0890076R	CAP.CERAMIC 150PF-K 50V
C939	0800328R	CAP. ELECTRO. 100UF-M 35V	CE05	0800326R	CAP.-ELECTRO. 100UF-M 16V
C940	0800353R	CAP.-ELECTRO.470UF-M 16V	CE06	0890064R	CAP.-CERAMIC 18PF-J SL 50V
C941	0880198R	CAP.-PLOY. 0.22UF-J 50V	CE08	AN00637R	CAP.POLYESTER 0.1UF 50V TAPE
C942	0800317R	CAP.-ELECTRO. 47UF-M(SMG) 16V	CE09	AN00637R	CAP.POLYESTER 0.1UF 50V TAPE
C943	0800279R	CAP.-ELECTORO. 1.0UF-M(SMG) 50V	CE10	0800321R	CAP.-ELECTRO. 47UF-M 50V
C945	0800291R	CAP.-ELECTRO. 10UF-M(SMG) 16V	CE11	0890074R	CAP.-CERAMIC 100PF-J 50V
C948	AL00952S	ALUMINIUM ELECTRO CAP (4700UF6.3V)	CE12	0244541F	CAPACITOR-CERAMIC 0.01MF-K B 500V
C949	AN00637R	CAP.POLYESTER 0.1UF 50V TAPE	CE13	0244541F	CAPACITOR-CERAMIC 0.01MF-K B 500V
C952	0800291R	CAP.-ELECTRO. 10UF-M(SMG) 16V	CE14	AL00009R	ALU.ELEC.CAP. 47UF 160V
C954	0800291R	CAP.-ELECTRO. 10UF-M(SMG) 16V	CE15	0247848R	CAP.-CERAMIC 56PF-J SL 500V
C955	AN00637R	CAP.POLYESTER 0.1UF 50V TAPE	CE16	AL00007R	AL ELEC CAP(220UF160V)
C956	AN00637R	CAP.POLYESTER 0.1UF 50V TAPE	CE17	0244509R	CAP.-CERAMIC 4700PF-KB B 500V
C957	0800299R	CAP.-ELECTRO. 22UF-M(SMG) 16V	CE18	0890074R	CAP.-CERAMIC 100PF-J 50V
⚠ C958	AJ00157R	CAPACITOR CERAMIC 1000P 400V B	CE19	AL00009R	ALU.ELEC.CAP. 47UF 160V
⚠ C959	AJ00163R	CAPACITOR CERAMIC 2200P 400V E	CE20	AL00009R	ALU.ELEC.CAP. 47UF 160V
C962	0800326R	CAP.-ELECTRO. 100UF-M 16V	CE21	0890079R	CAP.-CERAMIC 270PF-K 50V
C963	0800303R	CAP.-ELECTRO. 22UF-M 50V	CE23	0890079R	CAP.-CERAMIC 270PF-K 50V
C964	0800361N	CAP.-ELECTRO 1000UF 16V	CF01	0800291R	CAP.-ELECTRO. 10UF-M(SMG) 16V
C965	0800308R	CAP.-ELECTRO. 33UF-M(SMG) 16V	CF02	AL01296R	AL ELECT. CAP PW(0.47UF 350V)
C966	0880198R	CAP.-PLOY. 0.22UF-J 50V	CF03	AN01111F	METALLIZ POLY FILM CAP 0.001UF
C967	0243509R	CAPACITOR-CERAMIC 470PF-K 500V TAPE	CF04	AN00614R	CAP.POLYESTER 0.0018UF 50V TAPE
C968	0243509R	CAPACITOR-CERAMIC 470PF-K 500V TAPE	CF05	0800291R	CAP.-ELECTRO. 10UF-M(SMG) 16V
C969	0244109R	CAPACITOR-CERAMIC 4700PF-KB 50V	CF06	0800291R	CAP.-ELECTRO. 10UF-M(SMG) 16V
C971	0243511R	CAP.-CERAMIC 680PF-K 500V TAPE	CF07	0800291R	CAP.-ELECTRO. 10UF-M(SMG) 16V
C974	0243511R	CAP.-CERAMIC 680PF-K 500V TAPE	CF08	AN00624R	CAP.POLYESTER 0.01UF 50V TAPE
C975	0243511R	CAP.-CERAMIC 680PF-K 500V TAPE	CF09	0880196R	CAP.-POLYESTER 0.15UF 50V HFT
C976	AJ00129R	CAPACITOR CERAMIC 470P DC2K-R	CF10	0880197R	CAP.POLYESTER 0.18UF 50V
CA01	0800279R	CAP.-ELECTORO. 1.0UF-M(SMG) 50V	CF12	0800326R	CAP.-ELECTRO. 100UF-M 16V
CA02	0800279R	CAP.-ELECTORO. 1.0UF-M(SMG) 50V	CF13	AN00624R	CAP.POLYESTER 0.01UF 50V TAPE
CA05	0800279R	CAP.-ELECTORO. 1.0UF-M(SMG) 50V	CF14	0259151F	CAP.-ELECTRO. 100UF 160V
CA06	0800279R	CAP.-ELECTORO. 1.0UF-M(SMG) 50V	CF15	0880198R	CAP.-PLOY. 0.22UF-J 50V
CA07	0800279R	CAP.-ELECTORO. 1.0UF-M(SMG) 50V	CF16	0800291R	CAP.-ELECTRO. 10UF-M(SMG) 16V
CA08	0800279R	CAP.-ELECTORO. 1.0UF-M(SMG) 50V	CF17	0244109R	CAPACITOR-CERAMIC 4700PF-KB 50V
CA26	0800291R	CAP.-ELECTRO. 10UF-M(SMG) 16V	CF18	0245158	CAPACITOT CERAMIC 68PF/2KV
CA27	0800291R	CAP.-ELECTRO. 10UF-M(SMG) 16V	CF19	0245156	CAPACITOT CERAMIC 22PF/2KV
CA28	0800291R	CAP.-ELECTRO. 10UF-M(SMG) 16V	CF20	0800326R	CAP.-ELECTRO. 100UF-M 16V
CA29	0800291R	CAP.-ELECTRO. 10UF-M(SMG) 16V	CF21	AN00624R	CAP.POLYESTER 0.01UF 50V TAPE
CA34	0800291R	CAP.-ELECTRO. 10UF-M(SMG) 16V	CK18	AN00624R	CAP.POLYESTER 0.01UF 50V TAPE
CA37	0800291R	CAP.-ELECTRO. 10UF-M(SMG) 16V	CK19	AN00624R	CAP.POLYESTER 0.01UF 50V TAPE
CA38	0800317R	CAP.-ELECTRO. 47UF-M(SMG) 16V	CK20	0890087R	CAP.-CERAMIC 1000PF-K 50V
CA40	0800291R	CAP.-ELECTRO. 10UF-M(SMG) 16V	CK21	0890087R	CAP.-CERAMIC 1000PF-K 50V
CA41	0800291R	CAP.-ELECTRO. 10UF-M(SMG) 16V	CK22	0890087R	CAP.-CERAMIC 1000PF-K 50V
CA68	0284623R	CAP.-ELECTRO. 1UF-SME(BP) 50V	CK23	0890087R	CAP.-CERAMIC 1000PF-K 50V
CA69	0893027R	CAP 2125 CHIP 100000PF-K B 25V TAPE	CK24	0890087R	CAP.-CERAMIC 1000PF-K 50V

REPLACEMENT PARTS LIST

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SYMBOL NO.	PART NO.	PART DESCRIPTION	SYMBOL NO.	PART NO.	PART DESCRIPTION
CK25	0890087R	CAP.-CERAMIC 1000PF-K 50V	CS78	0800291R	CAP.-ELECTRO. 10UF-M(SMG) 16V
CK27	0800356N	CAP.-ELECTRO. 470UF-M 50V	CS79	0800291R	CAP.-ELECTRO. 10UF-M(SMG) 16V
CK28	0800356N	CAP.-ELECTRO. 470UF-M 50V	CS93	0800291R	CAP.-ELECTRO. 10UF-M(SMG) 16V
CK29	0890076R	CAP.CERAMIC 150PF-K 50V	CS94	0284634R	CAP.-ELECTRO 4.7UF-SME(BP) 50V
CK30	0890076R	CAP.CERAMIC 150PF-K 50V	CT01	0890079R	CAP.-CERAMIC 270PF-K 50V
CK31	0890076R	CAP.CERAMIC 150PF-K 50V	CT02	0800317R	CAP.-ELECTRO. 47UF-M(SMG) 16V
CK32	0890076R	CAP.CERAMIC 150PF-K 50V	CT03	0244141R	CAP.-CERAMIC 0.01UF-KB B 50V
CK33	0890076R	CAP.CERAMIC 150PF-K 50V	CT04	0244141R	CAP.-CERAMIC 0.01UF-KB B 50V
CK34	0890076R	CAP.CERAMIC 150PF-K 50V	CT05	0800317R	CAP.-ELECTRO. 47UF-M(SMG) 16V
CK37	AN00624R	CAP.POLYESTER 0.01UF 50V TAPE	CT06	0890076R	CAP.CERAMIC 150PF-K 50V
CK38	AN00624R	CAP.POLYESTER 0.01UF 50V TAPE	CT07	0244141R	CAP.-CERAMIC 0.01UF-KB B 50V
CK39	AN00624R	CAP.POLYESTER 0.01UF 50V TAPE	CT08	0800317R	CAP.-ELECTRO. 47UF-M(SMG) 16V
CK40	AN00624R	CAP.POLYESTER 0.01UF 50V TAPE	CT09	AN00615R	CAP.POLYESTER 0.0022UF 50V TAPE
CK50	0800291R	CAP.-ELECTRO. 10UF-M(SMG) 16V	CT10	0880198R	CAP.-PLOY. 0.22UF-J 50V
CK51	0800317R	CAP.-ELECTRO. 47UF-M(SMG) 16V	CT11	0299001F	CAP¤-POLYESTER 0.001UF-G 100V
CK52	0800326R	CAP.-ELECTRO. 100UF-M 16V	CT12	0800277R	CAP.-ELECTORO. 0.47UF-M 50V
CK53	0800326R	CAP.-ELECTRO. 100UF-M 16V	CT13	0800279R	CAP.-ELECTORO. 1.0UF-M(SMG) 50V
CK54	0800326R	CAP.-ELECTRO. 100UF-M 16V	CT14	0299029	CAP.-POLYESTER 0.015UF-GP 100V
CK55	AN00637R	CAP.POLYESTER 0.1UF 50V TAPE	CT15	AN00624R	CAP.POLYESTER 0.01UF 50V TAPE(AP91)
CK56	AN00637R	CAP.POLYESTER 0.1UF 50V TAPE	CT15	AN00626R	CAP.POLYESTER 0.015UF 50V TAPE(AP90)
CK57	0800326R	CAP.-ELECTRO. 100UF-M 16V	CT16	AN00626R	CAP.POLYESTER 0.015UF 50V TAPE
CK60	AN00624R	CAP.POLYESTER 0.01UF 50V TAPE	CT17	0800291R	CAP.-ELECTRO. 10UF-M(SMG) 16V
CK62	0890074R	CAP.-CERAMIC 100PF-J 50V	CT18	0800291R	CAP.-ELECTRO. 10UF-M(SMG) 16V
CK63	0890074R	CAP.-CERAMIC 100PF-J 50V	CT19	0800279R	CAP.-ELECTORO. 1.0UF-M(SMG) 50V
CM01	0800299R	CAP.-ELECTRO. 22UF-M(SMG) 16V	CT20	0800279R	CAP.-ELECTORO. 1.0UF-M(SMG) 50V
CM02	AN00624R	CAP.POLYESTER 0.01UF 50V TAPE	CT21	0800279R	CAP.-ELECTORO. 1.0UF-M(SMG) 50V
CM03	0800279R	CAP.-ELECTORO. 1.0UF-M(SMG) 50V	CT22	0800279R	CAP.-ELECTORO. 1.0UF-M(SMG) 50V
CM04	AN00624R	CAP.POLYESTER 0.01UF 50V TAPE	CT23	0800279R	CAP.-ELECTORO. 1.0UF-M(SMG) 50V
CM05	AN00624R	CAP.POLYESTER 0.01UF 50V TAPE	CT24	0800291R	CAP.-ELECTRO. 10UF-M(SMG) 16V
CM06	AN00637R	CAP.POLYESTER 0.1UF 50V TAPE	CT25	0800291R	CAP.-ELECTRO. 10UF-M(SMG) 16V
CM14	AN00637R	CAP.POLYESTER 0.1UF 50V TAPE	CT26	0800326R	CAP.-ELECTRO. 100UF-M 16V
CN01	0800279R	CAP.-ELECTORO. 1.0UF-M(SMG) 50V	CT27	0880001R	MYLAR CAPACITOR 680PF 50V
CN02	0800288R	CAP.-ELECTRO. 4.7UF-M(SMG) 50V	CT28	0880001R	MYLAR CAPACITOR 680PF 50V
CN03	AN00631R	CAP.POLYESTER 0.033UF 50V TAPE	CT29	0880016R	CAP.-POLYESTER FILM 0.1UF 50V
CN04	0890084R	CAP.-CERAMIC 560PF-K 50V	CT31	0800291R	CAP.-ELECTRO. 10UF-M(SMG) 16V
CN05	0800326R	CAP.-ELECTRO. 100UF-M 16V	CT32	AN00633R	CAP.POLYESTER 0.047UF 50V TAPE
CN06	0800294R	CAP.-ELECTRO. 10UF-M(SMG) 50V	CT33	0800291R	CAP.-ELECTRO. 10UF-M(SMG) 16V
CS38	0880194R	CAP.-POLYESTER 0.1UF-J 50V	CT34	0800291R	CAP.-ELECTRO. 10UF-M(SMG) 16V
CS39	0800335R	CAP.-ELECTRO. 220UF-M(SMG) 16V	CT35	0800291R	CAP.-ELECTRO. 10UF-M(SMG) 16V
CS60	0284634R	CAP.-ELECTRO 4.7UF-SME(BP) 50V	CT36	0800326R	CAP.-ELECTRO. 100UF-M 16V
CS62	0800288R	CAP.-ELECTRO. 4.7UF-M(SMG) 50V	CT37	0800279R	CAP.-ELECTORO. 1.0UF-M(SMG) 50V
CS63	0800288R	CAP.-ELECTRO. 4.7UF-M(SMG) 50V	CT38	0800279R	CAP.-ELECTORO. 1.0UF-M(SMG) 50V
CS64	0800291R	CAP.-ELECTRO. 10UF-M(SMG) 16V	CT39	0800279R	CAP.-ELECTORO. 1.0UF-M(SMG) 50V
CS65	0890087R	CAP.-CERAMIC 1000PF-K 50V	CT40	0800279R	CAP.-ELECTORO. 1.0UF-M(SMG) 50V
CS66	0800291R	CAP.-ELECTRO. 10UF-M(SMG) 16V	CT41	0800291R	CAP.-ELECTRO. 10UF-M(SMG) 16V
CS67	0890087R	CAP.-CERAMIC 1000PF-K 50V	CT42	0800291R	CAP.-ELECTRO. 10UF-M(SMG) 16V
CS68	AN00631R	CAP.POLYESTER 0.033UF 50V TAPE	CT43	0800291R	CAP.-ELECTRO. 10UF-M(SMG) 16V
CS69	AN00621R	CAP.POLYESTER 0.0056UF 50V TAPE	CT44	0800279R	CAP.-ELECTORO. 1.0UF-M(SMG) 50V
CS70	AN00621R	CAP.POLYESTER 0.0056UF 50V TAPE	CT45	0800291R	CAP.-ELECTRO. 10UF-M(SMG) 16V
CS71	AN00631R	CAP.POLYESTER 0.033UF 50V TAPE	CT46	0800291R	CAP.-ELECTRO. 10UF-M(SMG) 16V
CS72	0880194R	CAP.-POLYESTER 0.1UF-J 50V	CT47	0284638R	CAP.-ELECTRO. 10UF-SME(BP) 16V
CS73	0800326R	CAP.-ELECTRO. 100UF-M 16V	CT48	0800279R	CAP.-ELECTORO. 1.0UF-M(SMG) 50V
CS74	0800326R	CAP.-ELECTRO. 100UF-M 16V	CT49	0880011R	MYLAR CAPACITOR 0.015UF(AP91)
CS75	0800326R	CAP.-ELECTRO. 100UF-M 16V	CT49	0880012R	MYLAR CAP 0.022U 0204249C(AP90)
CS76	0800291R	CAP.-ELECTRO. 10UF-M(SMG) 16V	CT51	0800003R	CAP.-ELECTRO. 1.0UF-M 50V
CS77	0800288R	CAP.-ELECTRO. 4.7UF-M(SMG) 50V	CT52	AN00628R	CAP.POLYESTER 0.022UF 50V TAPE

REPLACEMENT PARTS LIST

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SYMBOL NO.	PART NO.	PART DESCRIPTION	SYMBOL NO.	PART NO.	PART DESCRIPTION
CT53	0299029	CAP.-POLYESTER 0.015UF-GP 100V	CY06	0800299R	CAP.-ELECTRO. 22UF-M(SMG) 16V
CT54	0800279R	CAP.-ELECTORO. 1.0UF-M(SMG) 50V	CY07	0800335R	CAP.-ELECTRO. 220UF-M(SMG) 16V
CT55	0880011R	MYLAR CAPACITOR 0.015UF	CY08	0800326R	CAP.-ELECTRO. 100UF-M 16V
CT56	0299029	CAP.-POLYESTER 0.015UF-GP 100V	CY09	0893053R	CAP2125CHIP 47000PFKB 50V TAPE
CT57	0800279R	CAP.-ELECTORO. 1.0UF-M(SMG) 50V(AP90)	CY10	0284638R	CAP.-ELECTRO. 10UF-SME(BP) 16V
CT58	0880011R	MYLAR CAPACITOR 0.015UF(AP90)	CY11	0800291R	CAP.-ELECTRO. 10UF-M(SMG) 16V
CT60	0800279R	CAP.-ELECTORO. 1.0UF-M(SMG) 50V	CY12	0800326R	CAP.-ELECTRO. 100UF-M 16V
CT61	0880013R	MYLAR CAPACITOR 0.033UF-K 50V	CY13	0893033R	CAP 2125CHIP 1500PFKB 50V TAPE
CT63	0800279R	CAP.-ELECTORO. 1.0UF-M(SMG) 50V	CY14	0800353R	CAP.-ELECTRO.470UF-M 16V
CT65	0880013R	MYLAR CAPACITOR 0.033UF-K 50V	CY17	0800317R	CAP.-ELECTRO. 47UF-M(SMG) 16V
CT66	0284623R	CAP.-ELECTRO. 1UF-SME(BP) 50V	CY18	0800326R	CAP.-ELECTRO. 100UF-M 16V
CT67	0284623R	CAP.-ELECTRO. 1UF-SME(BP) 50V	CY19	0893027R	CAP 2125 CHIP 100000PF-K B 25V TAPE
CT68	0284623R	CAP.-ELECTRO. 1UF-SME(BP) 50V	CY20	0893027R	CAP 2125 CHIP 100000PF-K B 25V TAPE
CT69	0284623R	CAP.-ELECTRO. 1UF-SME(BP) 50V	CY30	0800291R	CAP.-ELECTRO. 10UF-M(SMG) 16V
CT70	0284623R	CAP.-ELECTRO. 1UF-SME(BP) 50V	CY31	0800291R	CAP.-ELECTRO. 10UF-M(SMG) 16V
CT71	0284623R	CAP.-ELECTRO. 1UF-SME(BP) 50V	CY32	0800291R	CAP.-ELECTRO. 10UF-M(SMG) 16V
CT72	AL01401R	AL ELECT. CAP PW(100UF 35V)	CY33	0893044R	CAP2125CHIP 10000PFKB 50V TAPE
CX01	0800317R	CAP.-ELECTRO. 47UF-M(SMG) 16V(AP91)	CY34	0800326R	CAP.-ELECTRO. 100UF-M 16V
CX02	0228040R	CAP 2125CHIP 27PFJCH 50V TAPE(AP91)	CY50	0800299R	CAP.-ELECTRO. 22UF-M(SMG) 16V
CX03	0228008R	CAP 2125 CHIP 8PF-C CH 50V TAPE(AP91)	CY75	0284638R	CAP.-ELECTRO. 10UF-SME(BP) 16V
CX04	0228034R	CAP 2125 CHIP 15PF-J CH 50V TAPE(AP91)			**DIODES**
CX24	0893044R	CAP2125CHIP 10000PFKB 50V TAPE(AP91)	D005	2344041M	DIODE 1SS254TA/1SS270TA
CX25	0893044R	CAP2125CHIP 10000PFKB 50V TAPE(AP91)	D013	2344041M	DIODE 1SS254TA/1SS270TA
CX26	0893044R	CAP2125CHIP 10000PFKB 50V TAPE(AP91)	D015	2331827M	ZENER DIODE HZ-9 TAPE (C1) SI 500MW 9.3V
CX27	0800286R	CAP.-ELECTRO. 4.7UF-M(SMG) 25V(AP91)	D024	2344041M	DIODE 1SS254TA/1SS270TA
CX28	0893044R	CAP2125CHIP 10000PFKB 50V TAPE(AP91)	D025	2344041M	DIODE 1SS254TA/1SS270TA
CX29	0893053R	CAP2125CHIP 47000PFKB 50V TAPE(AP91)	D026	2348212M	DIO-MTZ-J15BTA
CX30	0893044R	CAP2125CHIP 10000PFKB 50V TAPE(AP91)	D027	2348212M	DIO-MTZ-J15BTA
CX31	0228060R	CAP 2125 CHIP 180PF-J CH 50V TAPE(AP91)	D028	2348212M	DIO-MTZ-J15BTA
CX32	0893044R	CAP2125CHIP 10000PFKB 50V TAPE(AP91)	D029	2348212M	DIO-MTZ-J15BTA
CX33	0893044R	CAP2125CHIP 10000PFKB 50V TAPE(AP91)	D030	2348212M	DIO-MTZ-J15BTA
CX34	0800325R	CAP.-ELECTRO. 100UF-M 10V(AP91)	D031	2344041M	DIODE 1SS254TA/1SS270TA
CX35	0893044R	CAP2125CHIP 10000PFKB 50V TAPE(AP91)	D040	2344041M	DIODE 1SS254TA/1SS270TA
CX36	0800325R	CAP.-ELECTRO. 100UF-M 10V(AP91)	D041	2344041M	DIODE 1SS254TA/1SS270TA
CX37	0893044R	CAP2125CHIP 10000PFKB 50V TAPE(AP91)	D044	2344041M	DIODE 1SS254TA/1SS270TA
CX38	0893044R	CAP2125CHIP 10000PFKB 50V TAPE(AP91)	D045	2348102M	ZENER MTZJ-5.1B TA
CX39	0893044R	CAP2125CHIP 10000PFKB 50V TAPE(AP91)	D048	2344041M	DIODE 1SS254TA/1SS270TA
CX40	0893044R	CAP2125CHIP 10000PFKB 50V TAPE(AP91)	D050	2344041M	DIODE 1SS254TA/1SS270TA(AP90)
CX41	0893044R	CAP2125CHIP 10000PFKB 50V TAPE(AP91)	D051	2344041M	DIODE 1SS254TA/1SS270TA
CX42	0800334R	CAP.-ELECTRO. 220UF 10V(AP91)	D052	2344041M	DIODE 1SS254TA/1SS270TA(AP90)
CX45	0800291R	CAP.-ELECTRO. 10UF-M(SMG) 16V(AP91)	D053	2344041M	DIODE 1SS254TA/1SS270TA
CX46	0800326R	CAP.-ELECTRO. 100UF-M 16V(AP91)	D055	CH00151M	DIODE DSM1SD2(200V)TAPE
CX47	0800326R	CAP.-ELECTRO. 100UF-M 16V(AP91)	D057	2344041M	DIODE 1SS254TA/1SS270TA
CX48	0893044R	CAP2125CHIP 10000PFKB 50V TAPE(AP91)	D058	2344041M	DIODE 1SS254TA/1SS270TA
CX49	0800326R	CAP.-ELECTRO. 100UF-M 16V(AP91)	D059	2344041M	DIODE 1SS254TA/1SS270TA
CX50	0800325R	CAP.-ELECTRO. 100UF-M 10V(AP91)	D101	2348212M	DIO-MTZ-J15BTA(AP91)
CX52	0800325R	CAP.-ELECTRO. 100UF-M 10V(AP91)	D106	2344041M	DIODE 1SS254TA/1SS270TA
CX53	0893044R	CAP2125CHIP 10000PFKB 50V TAPE(AP91)	D107	2344041M	DIODE 1SS254TA/1SS270TA
CX54	0284647R	CAP.-ELECTRO.22UF-SME(BP) 16V(AP91)	D111	2344041M	DIODE 1SS254TA/1SS270TA
CX55	0228042R	CAP 2125CHIP 33PFJCH 50V TAPE(AP91)	D112	2344041M	DIODE 1SS254TA/1SS270TA
CX56	0228042R	CAP 2125CHIP 33PFJCH 50V TAPE(AP91)	D113	2348123M	ZENER MTZJ-6.2C TA
CX57	0228048R	CAP. MINI-CHIP 56PF-J CH 50V TAPE(AP91)	D116	2331815M	ZENER HZ7-B2
CX58	0228048R	CAP. MINI-CHIP 56PF-J CH 50V TAPE(AP91)	D117	2335991M	ZENER HZ-T33 (02 TP)(AP91)
CY01	0284638R	CAP.-ELECTRO. 10UF-SME(BP) 16V	D118	2335991M	ZENER HZ-T33 (02 TP)
CY04	0800299R	CAP.-ELECTRO. 22UF-M(SMG) 16V	D301	2334324M	ZD RD36E TAPE (B3) SI 500MW 36V
CY05	0800299R	CAP.-ELECTRO. 22UF-M(SMG) 16V	D401	2344041M	DIODE 1SS254TA/1SS270TA

REPLACEMENT PARTS LIST

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SYMBOL NO.	PART NO.	PART DESCRIPTION
D402	2344041M	DIODE 1SS254TA/1SS270TA
D404	2344041M	DIODE 1SS254TA/1SS270TA
D405	2344041M	DIODE 1SS254TA/1SS270TA
D406	2344041M	DIODE 1SS254TA/1SS270TA
D407	2344041M	DIODE 1SS254TA/1SS270TA
D502	2344041M	DIODE 1SS254TA/1SS270TA
D503	2344041M	DIODE 1SS254TA/1SS270TA
D504	2344041M	DIODE 1SS254TA/1SS270TA
D505	2348163M	ZENER MTZJ-9.1C TA
D507	2344041M	DIODE 1SS254TA/1SS270TA
D508	2344041M	DIODE 1SS254TA/1SS270TA
D509	2348163M	ZENER MTZJ-9.1C TA
D510	2348163M	ZENER MTZJ-9.1C TA
D511	2348163M	ZENER MTZJ-9.1C TA
D513	2344041M	DIODE 1SS254TA/1SS270TA
D515	2348163M	ZENER MTZJ-9.1C TA
D516	2348163M	ZENER MTZJ-9.1C TA
D517	2348163M	ZENER MTZJ-9.1C TA
D602	2344041M	DIODE 1SS254TA/1SS270TA
D603	CH02011M	DIODE 1SR153-400
D604	CH02011M	DIODE 1SR153-400
D605	2344041M	DIODE 1SS254TA/1SS270TA
D606	2344041M	DIODE 1SS254TA/1SS270TA
D607	2334243M	ZENER RD16E (B2 T2/TP/TA) SI 10MA 16.51V
D609	CH02001M	DIODE 1SR139-400
D610	CH02001M	DIODE 1SR139-400
D611	CH02001M	DIODE 1SR139-400
D612	2331154M	ZENER HZ-12 (A1-3 B1-3.TA) SI 200MA 14.3V
D613	2344041M	DIODE 1SS254TA/1SS270TA
D614	CH02011M	DIODE 1SR153-400
D615	2344041M	DIODE 1SS254TA/1SS270TA
D616	2334305M	ZENER RD30E (B4 T2/TP/TA) SI 5MA 30.51V
D701	2344041M	DIODE 1SS254TA/1SS270TA
⚠ D702	2348511G	DIODE RS3FS LF-U1(014-201)
⚠ D703	CH00891S	DIODE UF5406 (600V)
⚠ D704	CH00891S	DIODE UF5406 (600V)
D705	2344041M	DIODE 1SS254TA/1SS270TA
D706	2344041M	DIODE 1SS254TA/1SS270TA
D708	2344041M	DIODE 1SS254TA/1SS270TA
⚠ D709	2335042M	ZENER HZ-22 (2L TP) SI 200MA 400MW
D710	CH02001M	DIODE 1SR139-400
⚠ D711	CH00031M	DIODE AU02V1(280V)
⚠ D712	CH00031M	DIODE AU02V1(280V)
D713	CH00901M	DIODE RGP02-15E 1500V 20A
D714	CH00901M	DIODE RGP02-15E 1500V 20A
D715	CH02011M	DIODE 1SR153-400
D716	2348231M	ZENER DIODE MTZ-18A TA
D717	2339612M	ZENER HZS-3 TA (BLL) SI 200MA 3V
D718	2344041M	DIODE 1SS254TA/1SS270TA
D719	CH02001M	DIODE 1SR139-400
D720	2334305M	ZENER RD30E (B4 T2/TP/TA) SI 5MA 30.51V
D721	2348193M	ZENER DIODE MTZJ-12C TA
D722	2348151M	ZENER MTZ-J8.2ATA
D723	2344041M	DIODE 1SS254TA/1SS270TA
D724	2348123M	ZENER MTZJ-6.2C TA
D725	2344041M	DIODE 1SS254TA/1SS270TA
D777	2334243M	ZENER RD16E (B2 T2/TP/TA) SI 10MA 16.51V
D778	2334305M	ZENER RD30E (B4 T2/TP/TA) SI 5MA 30.51V
D802	2344041M	DIODE 1SS254TA/1SS270TA
D803	2344041M	DIODE 1SS254TA/1SS270TA
D804	2344041M	DIODE 1SS254TA/1SS270TA
D805	2344041M	DIODE 1SS254TA/1SS270TA
D832	2344041M	DIODE 1SS254TA/1SS270TA
D833	2344041M	DIODE 1SS254TA/1SS270TA
D862	2344041M	DIODE 1SS254TA/1SS270TA
D863	2344041M	DIODE 1SS254TA/1SS270TA
⚠ D901	2338313	DIODE RBV-406M (60V) SI 0.1USEC
D902	CH02001M	DIODE 1SR139-400
D903	CH02001M	DIODE 1SR139-400
D904	CH02011M	DIODE 1SR153-400
D905	CH02011M	DIODE 1SR153-400
D906	2348253M	ZENER MTZ-J22CTA
D907	2334324M	ZD RD36E TAPE (B3) SI 500MW 36V
D908	CH02011M	DIODE 1SR153-400
D910	2331844M	ZENER HZ12-B1
D911	2331844M	ZENER HZ12-B1
D912	CH00183R	LIGHT EMITTING DIODE (SLZ-981C-06-T1)
D913	2336615	DIODE RU3YX (LF-A1)
D914	2337952S	DIODE RU4YX(LF015-302)
D915	2337952S	DIODE RU4YX(LF015-302)
D916	2337952S	DIODE RU4YX(LF015-302)
D917	CH02001M	DIODE 1SR139-400
D918	2348271M	ZENER MTZ-J27ATA
D919	2348213M	ZENER DIODE MTZJ-15C TA
D920	2344041M	DIODE 1SS254TA/1SS270TA
D921	2348121M	ZENER MTZJ-6.2A TA
D922	2348283M	ZENER DIODE MTZJ-30C TA
D923	2344041M	DIODE 1SS254TA/1SS270TA
D924	2348042M	ZENER MTZ-J3.0BTA
D925	2348264M	ZENER DIODE MTZJ-24D TA
D928	CH01042M	DIODE RK34 (40V)
D929	CH01061F	DIODE RU4AM(600V)
D931	2348283M	ZENER DIODE MTZJ-30C TA
D932	2344041M	DIODE 1SS254TA/1SS270TA
D933	2348132M	ZENER MTZ-J6.8BTA
D936	2348193M	ZENER DIODE MTZJ-12C TA
D937	2344041M	DIODE 1SS254TA/1SS270TA
D938	CH00921M	DIODE SB140 40V 1A
D939	CH00182R	LIGHT EMITTING DIODE (SLZ-381C-06-T1)
D940	CH00182R	LIGHT EMITTING DIODE (SLZ-381C-06-T1)
D941	2344041M	DIODE 1SS254TA/1SS270TA
D942	2348132M	ZENER MTZ-J6.8BTA
D943	2344041M	DIODE 1SS254TA/1SS270TA
D944	2344041M	DIODE 1SS254TA/1SS270TA
D945	CH02011M	DIODE 1SR153-400
D946	CH00182R	LIGHT EMITTING DIODE (SLZ-381C-06-T1)
D947	CH00182R	LIGHT EMITTING DIODE (SLZ-381C-06-T1)
D948	2344041M	DIODE 1SS254TA/1SS270TA
D951	2348092M	ZENER MTZ-J4.7BTA
D952	2344041M	DIODE 1SS254TA/1SS270TA
D956	2344041M	DIODE 1SS254TA/1SS270TA
D957	2348213M	ZENER DIODE MTZJ-15C TA

REPLACEMENT PARTS LIST

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SYMBOL NO.	PART NO.	PART DESCRIPTION	SYMBOL NO.	PART NO.	PART DESCRIPTION
D958	2344041M	DIODE 1SS254TA/1SS270TA	DN03	2344041M	DIODE 1SS254TA/1SS270TA
D959	2344041M	DIODE 1SS254TA/1SS270TA	DN04	2344041M	DIODE 1SS254TA/1SS270TA
D960	2344041M	DIODE 1SS254TA/1SS270TA	DN05	2348071M	ZENER DIODE MTZJ-3.9A TA
D961	2344041M	DIODE 1SS254TA/1SS270TA	DN06	2344041M	DIODE 1SS254TA/1SS270TA
D962	2344041M	DIODE 1SS254TA/1SS270TA	DN07	2344041M	DIODE 1SS254TA/1SS270TA
D963	2344041M	DIODE 1SS254TA/1SS270TA	DN08	CH02001M	DIODE 1SR139-400
D964	CH00182R	LIGHT EMITTING DIODE (SLZ-381C-06-T1)	DN09	2331849M	ZENER HZ12C3 (TA) SI 500MW
D966	CH00182R	LIGHT EMITTING DIODE (SLZ-381C-06-T1)	DN10	2344041M	DIODE 1SS254TA/1SS270TA
D967	CH00182R	LIGHT EMITTING DIODE (SLZ-381C-06-T1)	DN11	2344041M	DIODE 1SS254TA/1SS270TA
D969	2348102M	ZENER MTZJ-5.1B TA	DS05	CH00151M	DIODE DSM1SD2(200V)TAPE
D971	2348143M	DIODE MTZ-J7.5CTA	DT01	2344041M	DIODE 1SS254TA/1SS270TA
D973	CH02011M	DIODE 1SR153-400	DT02	2344041M	DIODE 1SS254TA/1SS270TA
D974	2348111M	ZENER MTZ-J5.6ATA	DT03	2344041M	DIODE 1SS254TA/1SS270TA
D975	2344041M	DIODE 1SS254TA/1SS270TA	DT04	2344041M	DIODE 1SS254TA/1SS270TA
DA01	2344041M	DIODE 1SS254TA/1SS270TA	DT05	2344041M	DIODE 1SS254TA/1SS270TA
DA02	2344041M	DIODE 1SS254TA/1SS270TA	DT06	2344041M	DIODE 1SS254TA/1SS270TA
DA03	2348031M	DIO-MTZ-J2.7ATA	DT07	2344041M	DIODE 1SS254TA/1SS270TA
DA04	2348031M	DIO-MTZ-J2.7ATA	DT08	2344041M	DIODE 1SS254TA/1SS270TA
DA11	2344041M	DIODE 1SS254TA/1SS270TA	DT09	2344041M	DIODE 1SS254TA/1SS270TA
DA12	2344041M	DIODE 1SS254TA/1SS270TA	DT11	2334285M	ZENER RD24EB4 TA
DA19	2344041M	DIODE 1SS254TA/1SS270TA	DT12	2334285M	ZENER RD24EB4 TA
DE03	2344041M	DIODE 1SS254TA/1SS270TA	DT13	2334285M	ZENER RD24EB4 TA
DE04	CH00151M	DIODE DSM1SD2(200V)TAPE	DT14	2334285M	ZENER RD24EB4 TA
DE05	CH00151M	DIODE DSM1SD2(200V)TAPE	DT15	2334285M	ZENER RD24EB4 TA
DE06	CH00151M	DIODE DSM1SD2(200V)TAPE	DT16	2334285M	ZENER RD24EB4 TA
DE07	CH00151M	DIODE DSM1SD2(200V)TAPE	DT17	2334285M	ZENER RD24EB4 TA
DF01	2344041M	DIODE 1SS254TA/1SS270TA	DT18	2334285M	ZENER RD24EB4 TA
DF02	2344041M	DIODE 1SS254TA/1SS270TA	DT19	2334285M	ZENER RD24EB4 TA
DF03	2344041M	DIODE 1SS254TA/1SS270TA	DT20	2334285M	ZENER RD24EB4 TA
DF04	2338531M	DIODE EG-01C (V) SI 0.5A	DT21	2334285M	ZENER RD24EB4 TA
DF05	2344041M	DIODE 1SS254TA/1SS270TA	DT22	2334285M	ZENER RD24EB4 TA
DF07	2344041M	DIODE 1SS254TA/1SS270TA	DY01	2344041M	DIODE 1SS254TA/1SS270TA
DF08	2344041M	DIODE 1SS254TA/1SS270TA	DY05	2348163M	ZENER MTZJ-9.1C TA
DF09	2344041M	DIODE 1SS254TA/1SS270TA	DY06	2348163M	ZENER MTZJ-9.1C TA
DK04	CH02011M	DIODE 1SR153-400	DY07	2348163M	ZENER MTZJ-9.1C TA
DK05	CH02011M	DIODE 1SR153-400			**COILS**
DK16	2334324M	ZD RD36E TAPE (B3) SI 500MW 36V	L002	2123781R	FILTER COIL 101K
DK17	2334324M	ZD RD36E TAPE (B3) SI 500MW 36V	L003	2123781R	FILTER COIL 101K
DK18	2334324M	ZD RD36E TAPE (B3) SI 500MW 36V	L004	BH00697R	COIL 100UH
DK19	2334324M	ZD RD36E TAPE (B3) SI 500MW 36V	L101	BH00697R	COIL 100UH
DK20	2334324M	ZD RD36E TAPE (B3) SI 500MW 36V	L102	BH00697R	COIL 100UH(AP91)
DK21	2334324M	ZD RD36E TAPE (B3) SI 500MW 36V	L103	2123781R	FILTER COIL 101K(AP91)
DK22	2334324M	ZD RD36E TAPE (B3) SI 500MW 36V	L104	2123781R	FILTER COIL 101K
DK23	2334324M	ZD RD36E TAPE (B3) SI 500MW 36V	L105	2123781R	FILTER COIL 101K(AP91)
DK24	2334324M	ZD RD36E TAPE (B3) SI 500MW 36V	L106	2123781R	FILTER COIL 101K
DK25	2334324M	ZD RD36E TAPE (B3) SI 500MW 36V	L107	2123781R	FILTER COIL 101K
DK26	2334324M	ZD RD36E TAPE (B3) SI 500MW 36V	L110	2123781R	FILTER COIL 101K
DK27	2334324M	ZD RD36E TAPE (B3) SI 500MW 36V	L111	2123781R	FILTER COIL 101K
DK50	2348103M	ZENER MTZJ-5.1C TA	L114	BH00214R	FILTER COIL 100UH
DK51	2344041M	DIODE 1SS254TA/1SS270TA	L201	2123105M	LAL02 AXIAL COIL 15UH-K(AP90)
DM01	2344041M	DIODE 1SS254TA/1SS270TA	L202	BH00697R	COIL 100UH(AP90)
DM02	2344041M	DIODE 1SS254TA/1SS270TA	L203	BH00697R	COIL 100UH(AP90)
DM03	CH00231	LED SLH-56VC3F	L204	2123107M	LAL02 AXIAL COIL 22UH-K(AP90)
DM04	2348212M	DIO-MTZ-J15BTA	L205	2123107M	LAL02 AXIAL COIL 22UH-K(AP90)
DM11	2348212M	DIO-MTZ-J15BTA	L206	BH00697R	COIL 100UH(AP90)
DN01	2344041M	DIODE 1SS254TA/1SS270TA	L207	BH00697R	COIL 100UH(AP90)
DN02	2344041M	DIODE 1SS254TA/1SS270TA	L401	BH01341M	COIL FERRITE BEADS

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SYMBOL NO.	PART NO.	PART DESCRIPTION	SYMBOL NO.	PART NO.	PART DESCRIPTION
L402	BH01341M	COIL FERRITE BEADS	LT01	BH00974	COIL 332KS1-7106A
L403	BH01341M	COIL FERRITE BEADS	LT02	BH00974	COIL 332KS1-7106A
L503	BH00697R	COIL 100UH	LT03	BH00961	COIL HC--JS1
L504	BH00697R	COIL 100UH	LT04	BH00974	COIL 332KS1-7106A
L505	BH00697R	COIL 100UH	LT05	BH00974	COIL 332KS1-7106A(AP90)
L506	BH00697R	COIL 100UH	LT06	BH00961	COIL HC--JS1
L507	BH00697R	COIL 100UH	LT07	BH00974	COIL 332KS1-7106A
L508	2123112M	COIL-AXIAL 47UH-K	LX01	2123105M	LAL02 AXIAL COIL 15UH-K(AP91)
L509	BH00697R	COIL 100UH	LX05	BH00697R	COIL 100UH(AP91)
L601	BZ00845	CHOKE COIL 680UH SL1720	LX06	BH00697R	COIL 100UH(AP91)
L602	2123468M	FERRITE BEADS CORE LEAD 0.8MH	LX07	BH00697R	COIL 100UH(AP91)
L701	BH00212R	FILTER COIL 68UH	LX08	BH00697R	COIL 100UH(AP91)
L702	2123468M	FERRITE BEADS CORE LEAD 0.8MH	LX09	BH00697R	COIL 100UH(AP91)
L703	2123468M	FERRITE BEADS CORE LEAD 0.8MH	LX10	BH00697R	COIL 100UH(AP91)
L704	2123468M	FERRITE BEADS CORE LEAD 0.8MH	LX11	2123109M	COIL-AXIAL 33UH-K(AP91)
L705	BZ00846	CHOKE COIL 1000UH SL1720	LX12	2123107M	LAL02 AXIAL COIL 22UH-K(AP91)
L706	BH00217R	FILTER COIL 180UH	LX13	2123107M	LAL02 AXIAL COIL 22UH-K(AP91)
L708	BH00205R	FILTER COIL 22UH(AP90)	LY01	BH00697R	COIL 100UH
L708	BH00206R	FILTER COIL 27UH(AP91)	LY04	BH00697R	COIL 100UH
L709	BZ00317	LINEARITY COIL 140UH-W	LY05	BH00697R	COIL 100UH
L710	BZ00318	LINEARITY COIL 50UH-W	LY06	2123781R	FILTER COIL 101K
L720	BH00228R	COIL 332K-1T7608A			**TRANSISTORS**
L803	BH00699R	COIL 150UH	Q001	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)
L833	BH00699R	COIL 150UH	Q002	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)
L863	BH00699R	COIL 150UH	Q004	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)
⚠ L901	BZ01841	LX-LINE FILTER(102)	Q005	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)
⚠ L902	BZ01831	LX-LINE FILTER(382)	Q006	CA11271R	TRS 2SA1037AK T146 RS
⚠ L903	BZ01841	LX-LINE FILTER(102)	Q007	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)
L905	BH00201R	FILTER COIL 10UH	Q008	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)
L906	BH00201R	FILTER COIL 10UH	Q009	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)
L907	BH00214R	FILTER COIL 100UH	Q011	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)
L909	BV00901	PL-CHOPPER COIL 200UH/2A	Q013	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)
L910	BH00212R	FILTER COIL 68UH	Q014	CA11271R	TRS 2SA1037AK T146 RS
L911	BV00901	PL-CHOPPER COIL 200UH/2A	Q015	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)
L912	BH00214R	FILTER COIL 100UH	Q016	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)
L913	BH00214R	FILTER COIL 100UH	Q017	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)
L914	BH00214R	FILTER COIL 100UH	Q018	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)
L917	BH00214R	FILTER COIL 100UH	Q019	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)
L921	2161152	FILTER COIL	Q024	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)
L922	BH00214R	FILTER COIL 100UH	Q026	2312171	TRS. 2SC3852
L924	2123469M	FERRITE BEADS CORE 2.3UH	Q027	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)
L925	2123468M	FERRITE BEADS CORE LEAD 0.8MH	Q028	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)
L926	2123468M	FERRITE BEADS CORE LEAD 0.8MH	Q030	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)
L927	2123468M	FERRITE BEADS CORE LEAD 0.8MH	Q032	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)
L930	2123469M	FERRITE BEADS CORE 2.3UH	Q101	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)
L931	2123469M	FERRITE BEADS CORE 2.3UH	Q102	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)(AP91)
L932	2123468M	FERRITE BEADS CORE LEAD 0.8MH	Q103	2320647M	TRS. 2SC1213 SI 80MHZ400MW(AP91)
LA02	BH00697R	COIL 100UH	Q106	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)
LE01	2123097M	LAL02 TYPE AXIAL COIL 3.9UH-K	Q107	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)
LE02	2123468M	FERRITE BEADS CORE LEAD 0.8MH	Q108	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)
LE03	2123468M	FERRITE BEADS CORE LEAD 0.8MH	Q109	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)
LE04	2123468M	FERRITE BEADS CORE LEAD 0.8MH	Q110	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)
LF01	BH00229R	COIL 472K-1T7608A	Q111	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)
LF02	BH00229R	COIL 472K-1T7608A	Q112	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)
LK15	BH00214R	FILTER COIL 100UH	Q113	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)
LS03	BH00697R	COIL 100UH	Q114	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)

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SYMBOL NO.	PART NO.	PART DESCRIPTION	SYMBOL NO.	PART NO.	PART DESCRIPTION
Q115	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)	Q833	2320591M	TRS. 2SC458 (B TZ/C TZ) SI 230MHZ200MW
Q201	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)(AP90)	Q861	2312372F	TRS-2SC3942
Q202	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)(AP90)	Q862	2320663M	TRS. 2SC1213A (C)
Q203	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)(AP90)	Q863	2320591M	TRS. 2SC458 (B TZ/C TZ) SI 230MHZ200MW
Q204	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)(AP90)	Q901	2312171	TRS. 2SC3852
Q205	CA11271R	TRS 2SA1037AK T146 RS(AP90)	Q902	2312171	TRS. 2SC3852
Q206	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)(AP90)	Q903	CF02281R	TRS. 2SA821S
Q207	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)(AP90)	Q905	2320591M	TRS. 2SC458 (B TZ/C TZ) SI 230MHZ200MW
Q208	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)(AP90)	Q906	2320591M	TRS. 2SC458 (B TZ/C TZ) SI 230MHZ200MW
Q209	CA11271R	TRS 2SA1037AK T146 RS(AP90)	Q907	CF02251R	2SC3415S TP
Q210	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)(AP90)	Q908	2320591M	TRS. 2SC458 (B TZ/C TZ) SI 230MHZ200MW
Q401	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)	Q909	2320637M	TRS. 2SA673 (C 26TZ/D 26TZ) SI 80MHZ 400MW
Q402	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)	Q912	2320591M	TRS. 2SC458 (B TZ/C TZ) SI 230MHZ200MW
Q403	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)	Q913	2320637M	TRS. 2SA673 (C 26TZ/D 26TZ) SI 80MHZ 400MW
Q404	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)	⚠ Q914	2323782R	THYRISTOR 03P2M(TA)
Q500	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)	Q916	2320591M	TRS. 2SC458 (B TZ/C TZ) SI 230MHZ200MW
Q501	CA00171R	TRS.CHIP IMT5 25V TAPE	Q917	2320637M	TRS. 2SA673 (C 26TZ/D 26TZ) SI 80MHZ 400MW
Q502	2328072R	TRS.CHIP FMW2 40V TAPE	Q918	2320591M	TRS. 2SC458 (B TZ/C TZ) SI 230MHZ200MW
Q503	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)	QA01	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)
Q504	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)	QA02	CA11271R	TRS 2SA1037AK T146 RS
Q505	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)	QA03	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)
Q506	CA11264R	PHOTO TRANSISTOR(DTC114EKA)	QA04	CA11271R	TRS 2SA1037AK T146 RS
Q509	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)	QA05	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)
Q510	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)	QA06	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)
Q511	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)	QA74	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)
Q512	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)	QA75	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)
Q513	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)	QA80	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)
Q515	CA11271R	TRS 2SA1037AK T146 RS	QE01	2320598M	TRS. 2SC458 (B TZ/C TZ/D TZ)
Q516	CA11271R	TRS 2SA1037AK T146 RS	QE02	2320598M	TRS. 2SC458 (B TZ/C TZ/D TZ)
Q517	CA11271R	TRS 2SA1037AK T146 RS	QE03	2320598M	TRS. 2SC458 (B TZ/C TZ/D TZ)
Q519	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)	QE04	2320598M	TRS. 2SC458 (B TZ/C TZ/D TZ)
Q520	CA11271R	TRS 2SA1037AK T146 RS	QE05	2320598M	TRS. 2SC458 (B TZ/C TZ/D TZ)
Q521	CA11271R	TRS 2SA1037AK T146 RS	QE06	2320647M	TRS. 2SC1213 (C 21 TZ/D 21 TZ) SI 80MHZ400MW
Q602	2320637M	TRS. 2SA673 (C 26TZ/D 26TZ) SI 80MHZ 400MW	QE07	2321351M	TRS. 2SA836/844D/E 100MA 200MW 200MHZSI TAPE
Q603	2320637M	TRS. 2SA673 (C 26TZ/D 26TZ) SI 80MHZ 400MW	QE08	CF00531	TRS. 2SA1964 160V
Q604	2320663M	TRS. 2SC1213A (C)	QE09	CF00541	TRS. 2SC5248 160V
Q605	2320637M	TRS. 2SA673 (C 26TZ/D 26TZ) SI 80MHZ 400MW	QE10	2320598M	TRS. 2SC458 (B TZ/C TZ/D TZ)
Q606	CF00611	TRS. 2SC3969(AB) 400V	QE11	2320598M	TRS. 2SC458 (B TZ/C TZ/D TZ)
Q607	2320637M	TRS. 2SA673 (C 26TZ/D 26TZ) SI 80MHZ 400MW	QE12	2320637M	TRS. 2SA673 (C 26TZ/D 26TZ) SI 80MHZ 400MW
Q609	2320637M	TRS. 2SA673 (C 26TZ/D 26TZ) SI 80MHZ 400MW	QF01	2320637M	TRS. 2SA673 (C 26TZ/D 26TZ) SI 80MHZ 400MW
Q701	2326216	TRS. 2SC3116 (S/T)	QF03	2320663M	TRS. 2SC1213A (C)
Q702	2320591M	TRS. 2SC458 (B TZ/C TZ) SI 230MHZ200MW	QF04	2320637M	TRS. 2SA673 (C 26TZ/D 26TZ) SI 80MHZ 400MW
Q703	2320637M	TRS. 2SA673 (C 26TZ/D 26TZ) SI 80MHZ 400MW	QF05	2320663M	TRS. 2SC1213A (C)
Q705	2320591M	TRS. 2SC458 (B TZ/C TZ) SI 230MHZ200MW	QF06	CF00821F	TRS. 2SC4686A 1200V
Q710	2320637M	TRS. 2SA673 (C 26TZ/D 26TZ) SI 80MHZ 400MW	QF07	CF00821F	TRS. 2SC4686A 1200V
Q711	2320591M	TRS. 2SC458 (B TZ/C TZ) SI 230MHZ200MW	QF08	CF00821F	TRS. 2SC4686A 1200V
Q712	2320637M	TRS. 2SA673 (C 26TZ/D 26TZ) SI 80MHZ 400MW	QF09	2320591M	TRS. 2SC458 (B TZ/C TZ) SI 230MHZ200MW
⚠ Q777	CF01541F	2SC2514 F HORIZ OUTPUT TRANS.	QF10	2320637M	TRS. 2SA673 (C 26TZ/D 26TZ) SI 80MHZ 400MW
Q801	2312372F	TRS-2SC3942	QF11	2320663M	TRS. 2SC1213A (C)
Q802	2320663M	TRS. 2SC1213A (C)	QF12	2320591M	TRS. 2SC458 (B TZ/C TZ) SI 230MHZ200MW
Q803	2320591M	TRS. 2SC458 (B TZ/C TZ) SI 230MHZ200MW	QF13	2320591M	TRS. 2SC458 (B TZ/C TZ) SI 230MHZ200MW
Q804	2320591M	TRS. 2SC458 (B TZ/C TZ) SI 230MHZ200MW	QF14	2320591M	TRS. 2SC458 (B TZ/C TZ) SI 230MHZ200MW
Q805	2320591M	TRS. 2SC458 (B TZ/C TZ) SI 230MHZ200MW	QF15	2320591M	TRS. 2SC458 (B TZ/C TZ) SI 230MHZ200MW
Q806	2320637M	TRS. 2SA673 (C 26TZ/D 26TZ) SI 80MHZ 400MW	QF16	2320637M	TRS. 2SA673 (C 26TZ/D 26TZ) SI 80MHZ 400MW
Q831	2312372F	TRS-2SC3942	QF17	CF10852R	TRS. DTC144ESA-T
Q832	2320663M	TRS. 2SC1213A (C)	QK10	2320591M	TRS. 2SC458 (B TZ/C TZ) SI 230MHZ200MW

REPLACEMENT PARTS LIST

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SYMBOL NO.	PART NO.	PART DESCRIPTION	SYMBOL NO.	PART NO.	PART DESCRIPTION
QM01	2320591M	TRS. 2SC458 (B TZ/C TZ) SI 230MHZ200MW	R010	0195916R	RESISTOR 2125 CHIP 1/16W 4.7KJ TAPE
QM02	2312992	PHOTO TRS. RPT-38PT3F (M)	R011	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE
QN01	2320591M	TRS. 2SC458 (B TZ/C TZ) SI 230MHZ200MW	R012	0195950R	RES 2125 CHIP 1/16W 100KJ TAPE
QN02	2320591M	TRS. 2SC458 (B TZ/C TZ) SI 230MHZ200MW	R013	0700054M	RES.-CARBON FLM 1/16W 10K-JB
QN03	2320591M	TRS. 2SC458 (B TZ/C TZ) SI 230MHZ200MW	R014	0195925R	RES 2125 CHIP 1/16W 10KJ TAPE
QN04	2320637M	TRS. 2SA673 (C 26TZ/D 26TZ) SI 80MHZ 400MV	R015	0195927R	RES 2125 CHIP 1/16W 12KJ TAPE
QN05	2320591M	TRS. 2SC458 (B TZ/C TZ) SI 230MHZ200MW	R016	0700051M	RES.-CARBON FLM 1/16W 5.6K-JB
QN06	2320637M	TRS. 2SA673 (C 26TZ/D 26TZ) SI 80MHZ 400MV	R021	0195925R	RES 2125 CHIP 1/16W 10KJ TAPE
QT01	2320595M	TRS. 2SC458 (D TP/D TZ)	R022	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE
QT02	2320595M	TRS. 2SC458 (D TP/D TZ)	R023	0195933R	RES.2125 CHIP 1/16W 22KJ TAPE
QT03	2320595M	TRS. 2SC458 (D TP/D TZ)	R025	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB(AP91)
QT04	2320595M	TRS. 2SC458 (D TP/D TZ)	R026	0195925R	RES 2125 CHIP 1/16W 10KJ TAPE(AP91)
QT05	2320637M	TRS. 2SA673 (C 26TZ/D 26TZ) SI 80MHZ 400MV	R029	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE
QT06	2320637M	TRS. 2SA673 (C 26TZ/D 26TZ) SI 80MHZ 400MV	R034	0195925R	RES 2125 CHIP 1/16W 10KJ TAPE
QT07	2320595M	TRS. 2SC458 (D TP/D TZ)	R035	0195933R	RES.2125 CHIP 1/16W 22KJ TAPE
QT08	2320637M	TRS. 2SA673 (C 26TZ/D 26TZ) SI 80MHZ 400MV	R036	0195875R	RES 2125 CHIP 1/16W 100J TAPE
QT11	2320595M	TRS. 2SC458 (D TP/D TZ)	R037	0195933R	RES.2125 CHIP 1/16W 22KJ TAPE
QT12	2320595M	TRS. 2SC458 (D TP/D TZ)	R038	0195875R	RES 2125 CHIP 1/16W 100J TAPE
QT13	2320595M	TRS. 2SC458 (D TP/D TZ)	R040	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE
QT14	2320595M	TRS. 2SC458 (D TP/D TZ)	R042	0195918R	RES 2125 CHIP 1/16W 5.6KJ TAPE
QX01	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)(AP91)	R043	0195875R	RES 2125 CHIP 1/16W 100J TAPE
QX02	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)(AP91)	R044	0195933R	RES.2125 CHIP 1/16W 22KJ TAPE
QX05	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)(AP91)	R045	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB
QX06	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)(AP91)	R046	0195933R	RES.2125 CHIP 1/16W 22KJ TAPE
QX07	CA11271R	TRS 2SA1037AK T146 RS(AP90)	R047	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB
QX08	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)(AP91)	R048	0195933R	RES.2125 CHIP 1/16W 22KJ TAPE
QX09	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)(AP91)	R049	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB
QX10	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)(AP91)	R050	0195933R	RES.2125 CHIP 1/16W 22KJ TAPE
QX11	CA11271R	TRS 2SA1037AK T146 RS(AP91)	R051	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB
QX12	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)(AP91)	R055	0195875R	RES 2125 CHIP 1/16W 100J TAPE
QY01	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)	R056	0195875R	RES 2125 CHIP 1/16W 100J TAPE
QY02	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)	R059	0195933R	RES.2125 CHIP 1/16W 22KJ TAPE
QY03	CA11271R	TRS 2SA1037AK T146 RS	R060	0700054M	RES.-CARBON FLM 1/16W 10K-JB
QY04	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)	R061	0195891R	RES 2125 CHIP 1/16W 470J TAPE
QY05	CA11264R	PHOTO TRANSISTOR(DTC114EKA)	R062	0195891R	RES 2125 CHIP 1/16W 470J TAPE
QY06	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)	R063	0195891R	RES 2125 CHIP 1/16W 470J TAPE
QY07	2326021M	TRS. 2SC1741S P/R/Q (TP) 250MHZ 300MW	R064	0195891R	RES 2125 CHIP 1/16W 470J TAPE
QY08	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)	R066	0700027M	RES.-CARBON FLM 1/16W 100-JB
QY10	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)	R067	0700051M	RES.-CARBON FLM 1/16W 5.6K-JB
QY11	CA11271R	TRS 2SA1037AK T146 RS	R068	0700027M	RES.-CARBON FLM 1/16W 100-JB
QY51	CA11271R	TRS 2SA1037AK T146 RS	R069	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB
QY57	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)	R070	0195918R	RES 2125 CHIP 1/16W 5.6KJ TAPE
QY58	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)	R071	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB
QY59	CA11271R	TRS 2SA1037AK T146 RS	R072	0700058M	RES.-CARBON FLM 1/16W 22K-JB
QY60	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)	R073	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB
QY61	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)	R074	0195941R	RESISTOR 2125 CHIP 1/16W 47KJ TAPE
QY62	CA11271R	TRS 2SA1037AK T146 RS	R075	0195941R	RESISTOR 2125 CHIP 1/16W 47KJ TAPE
QY63	2325691R	TRANSISTOR CHIP(2SC2412KQ/R)	R076	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE
		RISISTORS	R078	0700027M	RES.-CARBON FLM 1/16W 100-JB
R001	0195925R	RES 2125 CHIP 1/16W 10KJ TAPE	R081	0195918R	RES 2125 CHIP 1/16W 5.6KJ TAPE
R002	0195947R	RES.2125 CHIP 1/10W 82KJ TAPE	R082	0195883R	RES 2125 CHIP 1/16W 220J TAPE
R003	0195918R	RES 2125 CHIP 1/16W 5.6KJ TAPE	R083	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE
R005	0700063M	RES.-CARBON FLM 1/16W 47K-JB	R086	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE
R007	0195941R	RESISTOR 2125 CHIP 1/16W 47KJ TAPE	R087	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB
R008	0195941R	RESISTOR 2125 CHIP 1/16W 47KJ TAPE	R088	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB
R009	0195925R	RES 2125 CHIP 1/16W 10KJ TAPE	R089	0195875R	RES 2125 CHIP 1/16W 100J TAPE

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SYMBOL NO.	PART NO.	PART DESCRIPTION	SYMBOL NO.	PART NO.	PART DESCRIPTION
R090	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE	R0R3	0700027M	RES.-CARBON FLM 1/16W 100-JB
R099	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB	R0R4	0195875R	RES 2125 CHIP 1/16W 100J TAPE
R0A2	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB	R0R5	0195875R	RES 2125 CHIP 1/16W 100J TAPE
R0A5	0195875R	RES 2125 CHIP 1/16W 100J TAPE	R0R6	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB
R0A6	0195893R	RES 2125 CHIP 1/16W 560J TAPE	R0R7	0195933R	RES.2125 CHIP 1/16W 22KJ TAPE
R0A7	0195875R	RES 2125 CHIP 1/16W 100J TAPE	R0R8	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE
R0A8	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB	R0S1	0195950R	RES 2125 CHIP 1/16W 100KJ TAPE
R0A9	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB	R0S2	0195950R	RES 2125 CHIP 1/16W 100KJ TAPE
R0C1	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE	R0T1	0195925R	RES 2125 CHIP 1/16W 10KJ TAPE
R0C3	0195933R	RES.2125 CHIP 1/16W 22KJ TAPE	R0T2	0195925R	RES 2125 CHIP 1/16W 10KJ TAPE
R0C4	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE	R0T4	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE
R0C5	0195875R	RES 2125 CHIP 1/16W 100J TAPE	R0T5	0195933R	RES.2125 CHIP 1/16W 22KJ TAPE
R0C6	0700027M	RES.-CARBON FLM 1/16W 100-JB	R0T6	0195875R	RES 2125 CHIP 1/16W 100J TAPE
R0C7	0195929R	RES 2125 CHIP 1/16W 15KJ TAPE	R0T7	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE
R0E2	0195925R	RES 2125 CHIP 1/16W 10KJ TAPE	R0T8	0195250R	RES 2125 CHIP 1/16W 000 TAPE
R0E3	0188127M	RES.-CARBON FLM 560-JB 1/2W	R0T9	0195925R	RES 2125 CHIP 1/16W 10KJ TAPE
R0E4	0195933R	RES.2125 CHIP 1/16W 22KJ TAPE	R0U1	0195250R	RES 2125 CHIP 1/16W 000 TAPE
R0E5	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB	R0U3	0195875R	RES 2125 CHIP 1/16W 100J TAPE
R0E6	0195941R	RESISTOR 2125 CHIP 1/16W 47KJ TAPE	R0U4	0700027M	RES.-CARBON FLM 1/16W 100-JB
R0E7	0700055M	RES.-CARBON FLM 1/16W 12K-JB	R0U5	0700027M	RES.-CARBON FLM 1/16W 100-JB
R0E8	0195925R	RES 2125 CHIP 1/16W 10KJ TAPE	R101	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB
R0F7	0195950R	RES 2125 CHIP 1/16W 100KJ TAPE	R102	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE
R0F8	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE	R103	0195895R	RES.2125 CHIP 1/10W 680J TAPE
R0F9	0195918R	RES 2125 CHIP 1/16W 5.6KJ TAPE	R104	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE(AP91)
R0G1	0100123M	RES.-CARBON FLM 1/8W 270K-JB	R105	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE(AP91)
R0G5	0195875R	RES 2125 CHIP 1/16W 100J TAPE	R106	0195895R	RES.2125 CHIP 1/10W 680J TAPE(AP91)
R0G6	0195875R	RES 2125 CHIP 1/16W 100J TAPE	R107	0700054M	RES.-CARBON FLM 1/16W 10K-JB(AP91)
R0G7	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE	R109	0700063M	RES.-CARBON FLM 1/16W 47K-JB(AP91)
R0G8	0195925R	RES 2125 CHIP 1/16W 10KJ TAPE	R110	0195250R	RES 2125 CHIP 1/16W 000 TAPE(AP91)
R0G9	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB	R111	0700027M	RES.-CARBON FLM 1/16W 100-JB(AP91)
R0H1	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB	R112	0195925R	RES 2125 CHIP 1/16W 10KJ TAPE(AP91)
R0H2	0195916R	RESISTOR 2125 CHIP 1/16W 4.7KJ TAPE	R113	0195918R	RES 2125 CHIP 1/16W 5.6KJ TAPE(AP91)
R0H3	0195933R	RES.2125 CHIP 1/16W 22KJ TAPE	R114	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB(AP91)
R0H4	0195950R	RES 2125 CHIP 1/16W 100KJ TAPE	R115	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB(AP91)
R0H5	0195916R	RESISTOR 2125 CHIP 1/16W 4.7KJ TAPE	R116	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB(AP91)
R0H6	0195881R	RES 2125 CHIP 1/16W 180J TAPE	R118	0100059M	RES.-CARBON FLM 1/8W 560-JB(AP91)
R0H7	0195947R	RES.2125 CHIP 1/10W 82KJ TAPE	R119	0100059M	RES.-CARBON FLM 1/8W 560-JB
R0H8	0700064M	RES.-CARBON FLM 1/16W 56K-JB	R121	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB
R0L5	0195925R	RES 2125 CHIP 1/16W 10KJ TAPE	R122	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB
R0L6	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE	R123	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE
R0L8	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE	R124	0700027M	RES.-CARBON FLM 1/16W 100-JB
R0M2	0195916R	RESISTOR 2125 CHIP 1/16W 4.7KJ TAPE	R125	0700027M	RES.-CARBON FLM 1/16W 100-JB
R0M3	0195925R	RES 2125 CHIP 1/16W 10KJ TAPE	R127	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE
R0M4	AW00074	TRIMMER RESISTOR	R128	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB
R0M5	0700032M	RES.-CARBON FLM 1/16W 220-JB	R129	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE
R0M6	AW00074	TRIMMER RESISTOR	R132	0700063M	RES.-CARBON FLM 1/16W 47K-JB
R0M7	0700032M	RES.-CARBON FLM 1/16W 220-JB	R133	0700063M	RES.-CARBON FLM 1/16W 47K-JB
R0M8	AW00074	TRIMMER RESISTOR	R134	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB
R0M9	0700032M	RES.-CARBON FLM 1/16W 220-JB	R135	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE
R0N4	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE	R141	0195893R	RES 2125 CHIP 1/16W 560J TAPE
R0P3	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB	R142	0700054M	RES.-CARBON FLM 1/16W 10K-JB
R0P5	0195941R	RESISTOR 2125 CHIP 1/16W 47KJ TAPE	R144	0700054M	RES.-CARBON FLM 1/16W 10K-JB
R0P6	0195925R	RES 2125 CHIP 1/16W 10KJ TAPE	R146	0700027M	RES.-CARBON FLM 1/16W 100-JB
R0P8	0700058M	RES.-CARBON FLM 1/16W 22K-JB	R147	0700027M	RES.-CARBON FLM 1/16W 100-JB
R0P9	0195925R	RES 2125 CHIP 1/16W 10KJ TAPE	R148	0195875R	RES 2125 CHIP 1/16W 100J TAPE
R0R1	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE	R149	0195875R	RES 2125 CHIP 1/16W 100J TAPE

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SYMBOL NO.	PART NO.	PART DESCRIPTION	SYMBOL NO.	PART NO.	PART DESCRIPTION
R150	0195893R	RES 2125 CHIP 1/16W 560J TAPE	R221	0195891R	RES 2125 CHIP 1/16W 470J TAPE(AP90)
R151	0195891R	RES 2125 CHIP 1/16W 470J TAPE	R222	0195889R	RES.2125 CHIP 1/10W 390J TAPE(AP90)
R152	0195891R	RES 2125 CHIP 1/16W 470J TAPE	R223	0195895R	RES.2125 CHIP 1/10W 680J TAPE(AP90)
R153	0195891R	RES 2125 CHIP 1/16W 470J TAPE	R224	0195925R	RES 2125 CHIP 1/16W 10KJ TAPE(AP90)
R154	0700036M	RES.-CARBON FLM 1/16W 470-JB	R225	0195875R	RES 2125 CHIP 1/16W 100J TAPE(AP90)
R155	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE	R226	0195897R	RES 2125 CHIP 1/16W 820J TAPE(AP90)
R156	0700065M	RES.-CARBON FLM 1/16W 68K-JB	R227	0195875R	RES 2125 CHIP 1/16W 100J TAPE(AP90)
R157	AT03694M	RES.MTL GRAZD FLM 1W 10M	R228	0195897R	RES 2125 CHIP 1/16W 820J TAPE(AP90)
R158	0195875R	RES 2125 CHIP 1/16W 100J TAPE	R229	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE(AP90)
R159	0700027M	RES.-CARBON FLM 1/16W 100-JB	R230	0195914R	RES 2125 CHIP 1/16W 3.9KJ TAPE(AP90)
R160	0195925R	RES 2125 CHIP 1/16W 10KJ TAPE	R231	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE(AP90)
R163	0700027M	RES.-CARBON FLM 1/16W 100-JB	R232	0195935R	RES 2125 CHIP 1/16W 27K-J TAPE(AP90)
R167	0195883R	RES 2125 CHIP 1/16W 220J TAPE	R233	0195925R	RES 2125 CHIP 1/16W 10KJ TAPE(AP90)
R168	0195883R	RES 2125 CHIP 1/16W 220J TAPE	R234	0195891R	RES 2125 CHIP 1/16W 470J TAPE(AP90)
R169	0195883R	RES 2125 CHIP 1/16W 220J TAPE	R235	0195887R	RES 2125 CHIP 1/16W 330J TAPE(AP90)
R173	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE	R236	0195895R	RES.2125 CHIP 1/10W 680J TAPE(AP90)
R174	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE	R237	0195925R	RES 2125 CHIP 1/16W 10KJ TAPE(AP90)
R175	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE	R238	0195875R	RES 2125 CHIP 1/16W 100J TAPE(AP90)
R176	0100041M	RES.-CARBON FLM 1/8W 100-JB	R239	0195897R	RES 2125 CHIP 1/16W 820J TAPE(AP90)
R177	0195875R	RES 2125 CHIP 1/16W 100J TAPE	R312	0195883R	RES 2125 CHIP 1/16W 220J TAPE
R178	0195883R	RES 2125 CHIP 1/16W 220J TAPE	R3A7	0700032M	RES.-CARBON FLM 1/16W 220-JB
R179	0195883R	RES 2125 CHIP 1/16W 220J TAPE	R3A8	0700032M	RES.-CARBON FLM 1/16W 220-JB
R180	0195883R	RES 2125 CHIP 1/16W 220J TAPE	R3C3	0700048M	RES.-CARBON FLM 1/16W 3.9K-JB
R181	0195883R	RES 2125 CHIP 1/16W 220J TAPE	R3C4	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB
R182	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE	R3E1	0195250R	RES 2125 CHIP 1/16W 000 TAPE
R183	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE	R3E2	0195248R	RES 3216 CHIP 1/8 W 000 TAPE
R184	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE	R3E3	0195250R	RES 2125 CHIP 1/16W 000 TAPE
R185	0195875R	RES 2125 CHIP 1/16W 100J TAPE	R3E4	0195250R	RES 2125 CHIP 1/16W 000 TAPE
R186	0195925R	RES 2125 CHIP 1/16W 10KJ TAPE	R3E5	0195248R	RES 3216 CHIP 1/8 W 000 TAPE
R187	0195925R	RES 2125 CHIP 1/16W 10KJ TAPE	R3E6	0195250R	RES 2125 CHIP 1/16W 000 TAPE
R196	0700042M	RES.-CARBON FLM 1/16W 1.2K-JB	R3E7	0195248R	RES 3216 CHIP 1/8 W 000 TAPE
R197	0700042M	RES.-CARBON FLM 1/16W 1.2K-JB	R3E8	0195248R	RES 3216 CHIP 1/8 W 000 TAPE
R198	0700042M	RES.-CARBON FLM 1/16W 1.2K-JB	R3F1	0195250R	RES 2125 CHIP 1/16W 000 TAPE
R1A2	0700023M	RES.-CARBON FLM 1/16W 47-J	R3F3	0195248R	RES 3216 CHIP 1/8 W 000 TAPE
R1A3	0700027M	RES.-CARBON FLM 1/16W 100-JB(AP91)	R3F4	0195248R	RES 3216 CHIP 1/8 W 000 TAPE
R1A9	0195933R	RES.2125 CHIP 1/16W 22KJ TAPE(AP91)	R3F5	0195248R	RES 3216 CHIP 1/8 W 000 TAPE
R1B2	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB	R3F6	0195248R	RES 3216 CHIP 1/8 W 000 TAPE
R1C1	0195893R	RES 2125 CHIP 1/16W 560J TAPE	R3F7	0195250R	RES 2125 CHIP 1/16W 000 TAPE
R201	0195935R	RES 2125 CHIP 1/16W 27K-J TAPE(AP90)	R3F8	0195248R	RES 3216 CHIP 1/8 W 000 TAPE
R202	0195950R	RES 2125 CHIP 1/16W 100KJ TAPE(AP90)	R3F9	0195250R	RES 2125 CHIP 1/16W 000 TAPE
R203	0195875R	RES 2125 CHIP 1/16W 100J TAPE(AP90)	R3G1	0195250R	RES 2125 CHIP 1/16W 000 TAPE
R204	0195897R	RES 2125 CHIP 1/16W 820J TAPE(AP90)	R3G2	0195250R	RES 2125 CHIP 1/16W 000 TAPE
R205	0195891R	RES 2125 CHIP 1/16W 470J TAPE(AP90)	R3G3	0195250R	RES 2125 CHIP 1/16W 000 TAPE
R206	0195896R	RES MINI-CHIP RMC1/10 750-J TAPE(AP90)	R3G4	0195248R	RES 3216 CHIP 1/8 W 000 TAPE
R207	0195896R	RES MINI-CHIP RMC1/10 750-J TAPE(AP90)	R3G6	0195250R	RES 2125 CHIP 1/16W 000 TAPE
R208	0195875R	RES 2125 CHIP 1/16W 100J TAPE(AP90)	R3G7	0195250R	RES 2125 CHIP 1/16W 000 TAPE
R209	0195897R	RES 2125 CHIP 1/16W 820J TAPE(AP90)	R3G8	0195250R	RES 2125 CHIP 1/16W 000 TAPE
R210	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE(AP90)	R3G9	0195250R	RES 2125 CHIP 1/16W 000 TAPE
R213	0195897R	RES 2125 CHIP 1/16W 820J TAPE(AP90)	R3H1	0195248R	RES 3216 CHIP 1/8 W 000 TAPE
R214	0700027M	RES.-CARBON FLM 1/16W 100-JB(AP90)	R3H2	0195250R	RES 2125 CHIP 1/16W 000 TAPE
R215	0195897R	RES 2125 CHIP 1/16W 820J TAPE(AP90)	R3H4	0195248R	RES 3216 CHIP 1/8 W 000 TAPE
R216	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE(AP90)	R3H7	0195250R	RES 2125 CHIP 1/16W 000 TAPE
R217	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE(AP90)	R3H8	0195248R	RES 3216 CHIP 1/8 W 000 TAPE
R218	0195914R	RES 2125 CHIP 1/16W 3.9KJ TAPE(AP90)	R3H9	0195250R	RES 2125 CHIP 1/16W 000 TAPE
R219	0195943R	RES.2125 CHIP 1/16W 56KJ TAPE(AP90)	R3J4	0195250R	RES 2125 CHIP 1/16W 000 TAPE
R220	0195935R	RES 2125 CHIP 1/16W 27K-J TAPE(AP90)	R3J5	0195250R	RES 2125 CHIP 1/16W 000 TAPE

REPLACEMENT PARTS LIST

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SYMBOL NO.	PART NO.	PART DESCRIPTION	SYMBOL NO.	PART NO.	PART DESCRIPTION
R3J6	0195248R	RES 3216 CHIP 1/8 W 000 TAPE	R518	0195904R	RESISTOR 2125 CHIP 1/16W 1.5KJ TAPE
R3J7	0195248R	RES 3216 CHIP 1/8 W 000 TAPE	R519	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE
R3J8	0195250R	RES 2125 CHIP 1/16W 000 TAPE	R520	0195904R	RESISTOR 2125 CHIP 1/16W 1.5KJ TAPE
R3J9	0195250R	RES 2125 CHIP 1/16W 000 TAPE	R521	0195941R	RESISTOR 2125 CHIP 1/16W 47KJ TAPE
R3K1	0195248R	RES 3216 CHIP 1/8 W 000 TAPE	R522	0195910R	RES.2125 CHIP 1/16W 2.7KJ TAPE
R3K2	0195248R	RES 3216 CHIP 1/8 W 000 TAPE	R523	0195875R	RES 2125 CHIP 1/16W 100J TAPE
R3K3	0195248R	RES 3216 CHIP 1/8 W 000 TAPE	R524	0195925R	RES 2125 CHIP 1/16W 10KJ TAPE
R3K4	0195250R	RES 2125 CHIP 1/16W 000 TAPE	R525	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE
R3K5	0195248R	RES 3216 CHIP 1/8 W 000 TAPE	R526	0195908R	RES.2125 CHIP 1/10W 2.2KJ TAPE
R3K6	0195250R	RES 2125 CHIP 1/16W 000 TAPE	R527	0195891R	RES 2125 CHIP 1/16W 470J TAPE
R3K8	0195250R	RES 2125 CHIP 1/16W 000 TAPE	R528	0195891R	RES 2125 CHIP 1/16W 470J TAPE
R3K9	0195250R	RES 2125 CHIP 1/16W 000 TAPE	R529	0195875R	RES 2125 CHIP 1/16W 100J TAPE
R3L1	0195248R	RES 3216 CHIP 1/8 W 000 TAPE	R530	0195879R	RES 2125 CHIP 1/16W 150J TAPE
R3L2	0195250R	RES 2125 CHIP 1/16W 000 TAPE	R531	0195927R	RES 2125 CHIP 1/16W 12KJ TAPE
R3L6	0195250R	RES 2125 CHIP 1/16W 000 TAPE	R532	0195889R	RES.2125 CHIP 1/10W 390J TAPE
R3L7	0195248R	RES 3216 CHIP 1/8 W 000 TAPE	R533	0195889R	RES.2125 CHIP 1/10W 390J TAPE
R3L8	0195250R	RES 2125 CHIP 1/16W 000 TAPE	R534	0195875R	RES 2125 CHIP 1/16W 100J TAPE
R3L9	0195248R	RES 3216 CHIP 1/8 W 000 TAPE	R535	0195929R	RES 2125 CHIP 1/16W 15KJ TAPE
R3M1	0195248R	RES 3216 CHIP 1/8 W 000 TAPE	R536	0195875R	RES 2125 CHIP 1/16W 100J TAPE
R3M2	0195248R	RES 3216 CHIP 1/8 W 000 TAPE	R537	0195927R	RES 2125 CHIP 1/16W 12KJ TAPE
R3M3	0195250R	RES 2125 CHIP 1/16W 000 TAPE	R538	0195870R	RESISTOR MINI-CHIP RMC1/10 68-J TAPE
R3M7	0195250R	RES 2125 CHIP 1/16W 000 TAPE	R539	0195870R	RESISTOR MINI-CHIP RMC1/10 68-J TAPE
R3M8	0195250R	RES 2125 CHIP 1/16W 000 TAPE	R540	0195925R	RES 2125 CHIP 1/16W 10KJ TAPE
R3M9	0195250R	RES 2125 CHIP 1/16W 000 TAPE	R541	0195875R	RES 2125 CHIP 1/16W 100J TAPE
R3P1	0195250R	RES 2125 CHIP 1/16W 000 TAPE	R542	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE
R3P2	0195250R	RES 2125 CHIP 1/16W 000 TAPE	R545	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE
R3P3	0195250R	RES 2125 CHIP 1/16W 000 TAPE	R547	0195908R	RES.2125 CHIP 1/10W 2.2KJ TAPE
R3P4	0700053M	RES.-CARBON FLM 1/16W 8.2K-JB	R548	0195912R	RES 2125 CHIP 1/16W 3.3KJ TAPE
R402	0700054M	RES.-CARBON FLM 1/16W 10K-JB	R549	0195933R	RES.2125 CHIP 1/16W 22KJ TAPE
R404	0700054M	RES.-CARBON FLM 1/16W 10K-JB	R550	0195922R	RES 2125 CHIP 1/16W 8.2KJ TAPE
R405	0700045M	RES.-CARBON FLM 1/16W 2.2K-JB	R551	0195875R	RES 2125 CHIP 1/16W 100J TAPE
R406	0700045M	RES.-CARBON FLM 1/16W 2.2K-JB	R552	0195931R	RES 2125 CHIP 1/16W 18KJ TAPE
R407	0700037M	RES.-CARBON FLM 1/16W 560-JB	R553	0195879R	RES 2125 CHIP 1/16W 150J TAPE
R408	0700037M	RES.-CARBON FLM 1/16W 560-JB	R555	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE
R411	0700063M	RES.-CARBON FLM 1/16W 47K-JB	R556	0195910R	RES.2125 CHIP 1/16W 2.7KJ TAPE
R412	0700063M	RES.-CARBON FLM 1/16W 47K-JB	R557	0195925R	RES 2125 CHIP 1/16W 10KJ TAPE
R413	0700067M	RES.-CARBON FLM 1/16W 100K-JB	R558	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB
R414	0700036M	RES.-CARBON FLM 1/16W 470-JB	R559	0195925R	RES 2125 CHIP 1/16W 10KJ TAPE
R415	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB	R561	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB
R416	0700058M	RES.-CARBON FLM 1/16W 22K-JB	R562	0195875R	RES 2125 CHIP 1/16W 100J TAPE
R417	AT01549S	METAL FILM RESISTOR(2.2OHM 1W)	R563	0195889R	RES.2125 CHIP 1/10W 390J TAPE
R418	AT01549S	METAL FILM RESISTOR(2.2OHM 1W)	R564	0195885R	RESISTOR 2125 CHIP 1/16W 270J TAPE
R419	0700065M	RES.-CARBON FLM 1/16W 68K-JB	R566	0188118M	RES.-CARBON FLM 1/2W 120-JB
R420	0700065M	RES.-CARBON FLM 1/16W 68K-JB	R567	0195908R	RES.2125 CHIP 1/10W 2.2KJ TAPE
R421	0188131M	RES.-CARBON FLM 1/4W 1K-JB	R568	0195875R	RES 2125 CHIP 1/16W 100J TAPE
R422	0188131M	RES.-CARBON FLM 1/4W 1K-JB	R569	0195925R	RES 2125 CHIP 1/16W 10KJ TAPE
R503	0195920R	RES 2125 CHIP 1/16W 6.8KJ TAPE	R570	0195875R	RES 2125 CHIP 1/16W 100J TAPE
R504	0700032M	RES.-CARBON FLM 1/16W 220-JB	R571	0195875R	RES 2125 CHIP 1/16W 100J TAPE
R505	0700032M	RES.-CARBON FLM 1/16W 220-JB	R572	0195941R	RESISTOR 2125 CHIP 1/16W 47KJ TAPE
R506	0195883R	RES 2125 CHIP 1/16W 220J TAPE	R573	0195941R	RESISTOR 2125 CHIP 1/16W 47KJ TAPE
R508	0195879R	RES 2125 CHIP 1/16W 150J TAPE	R574	0195875R	RES 2125 CHIP 1/16W 100J TAPE
R509	0195250R	RES 2125 CHIP 1/16W 000 TAPE	R575	0195875R	RES 2125 CHIP 1/16W 100J TAPE
R510	0195906R	RESISTOR MINI-CHIP RMC1/16 1.8K-J TAPE	R576	0195883R	RES 2125 CHIP 1/16W 220J TAPE
R511	0195914R	RES 2125 CHIP 1/16W 3.9KJ TAPE	R577	0195883R	RES 2125 CHIP 1/16W 220J TAPE
R516	0195875R	RES 2125 CHIP 1/16W 100J TAPE	R578	0195883R	RES 2125 CHIP 1/16W 220J TAPE
R517	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE	R579	0188125M	RES.-CARBON FLM 390-J 1/2W

REPLACEMENT PARTS LIST

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SYMBOL NO.	PART NO.	PART DESCRIPTION	SYMBOL NO.	PART NO.	PART DESCRIPTION
R580	0188125M	RES.-CARBON FLM 390-J 1/2W	R5G1	0195925R	RES 2125 CHIP 1/16W 10KJ TAPE
R581	0188125M	RES.-CARBON FLM 390-J 1/2W	R5G4	0195250R	RES 2125 CHIP 1/16W 000 TAPE
R582	0195883R	RES 2125 CHIP 1/16W 220J TAPE	R5G5	0195250R	RES 2125 CHIP 1/16W 000 TAPE
R583	0195883R	RES 2125 CHIP 1/16W 220J TAPE	R5G7	0195250R	RES 2125 CHIP 1/16W 000 TAPE
R584	0195883R	RES 2125 CHIP 1/16W 220J TAPE	R5G9	0195250R	RES 2125 CHIP 1/16W 000 TAPE
R586	0700044M	RES.-CARBON FLM 1/16W 1.8K-JB	R5H1	0195250R	RES 2125 CHIP 1/16W 000 TAPE
R588	0195248R	RES 3216 CHIP 1/8 W 000 TAPE	R5H2	0195250R	RES 2125 CHIP 1/16W 000 TAPE
R590	0195248R	RES 3216 CHIP 1/8 W 000 TAPE	R5H3	0195248R	RES 3216 CHIP 1/8 W 000 TAPE
R591	0195248R	RES 3216 CHIP 1/8 W 000 TAPE	R5H4	0195250R	RES 2125 CHIP 1/16W 000 TAPE
R592	0195248R	RES 3216 CHIP 1/8 W 000 TAPE	R5H5	0195248R	RES 3216 CHIP 1/8 W 000 TAPE
R593	0195250R	RES 2125 CHIP 1/16W 000 TAPE	R5H7	0195250R	RES 2125 CHIP 1/16W 000 TAPE
R595	0195250R	RES 2125 CHIP 1/16W 000 TAPE	R5J4	0195248R	RES 3216 CHIP 1/8 W 000 TAPE
R597	0195250R	RES 2125 CHIP 1/16W 000 TAPE	R5K2	0700052M	RES.-CARBON FLM 1/16W 6.8K-JB
R598	0195248R	RES 3216 CHIP 1/8 W 000 TAPE	R605	0700054M	RES.-CARBON FLM 1/16W 10K-JB
R5A0	0195250R	RES 2125 CHIP 1/16W 000 TAPE	R606	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB
R5A1	0195248R	RES 3216 CHIP 1/8 W 000 TAPE	R607	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB
R5A2	0195248R	RES 3216 CHIP 1/8 W 000 TAPE	R608	0700046M	RES.-CARBON FLM 1/16W 2.7K-JB
R5A3	0195248R	RES 3216 CHIP 1/8 W 000 TAPE	R609	0700046M	RES.-CARBON FLM 1/16W 2.7K-JB
R5A4	0195248R	RES 3216 CHIP 1/8 W 000 TAPE	R610	0700053M	RES.-CARBON FLM 1/16W 8.2K-JB
R5A5	0195248R	RES 3216 CHIP 1/8 W 000 TAPE	R611	0700054M	RES.-CARBON FLM 1/16W 10K-JB
R5A6	0195250R	RES 2125 CHIP 1/16W 000 TAPE	R612	0700063M	RES.-CARBON FLM 1/16W 47K-JB
R5A8	0195248R	RES 3216 CHIP 1/8 W 000 TAPE	R613	0700055M	RES.-CARBON FLM 1/16W 12K-JB
R5A9	0195250R	RES 2125 CHIP 1/16W 000 TAPE	R614	0700055M	RES.-CARBON FLM 1/16W 12K-JB
R5C0	0195250R	RES 2125 CHIP 1/16W 000 TAPE	R615	0700054M	RES.-CARBON FLM 1/16W 10K-JB
R5C3	0195925R	RES 2125 CHIP 1/16W 10KJ TAPE	R616	0700063M	RES.-CARBON FLM 1/16W 47K-JB
R5C4	0195925R	RES 2125 CHIP 1/16W 10KJ TAPE	R617	0700053M	RES.-CARBON FLM 1/16W 8.2K-JB
R5C5	0195248R	RES 3216 CHIP 1/8 W 000 TAPE	R618	0700046M	RES.-CARBON FLM 1/16W 2.7K-JB
R5C6	0195250R	RES 2125 CHIP 1/16W 000 TAPE	R619	0700046M	RES.-CARBON FLM 1/16W 2.7K-JB
R5C7	0195250R	RES 2125 CHIP 1/16W 000 TAPE	R620	0700055M	RES.-CARBON FLM 1/16W 12K-JB
R5C8	0195248R	RES 3216 CHIP 1/8 W 000 TAPE	R621	0700054M	RES.-CARBON FLM 1/16W 10K-JB
R5C9	0195250R	RES 2125 CHIP 1/16W 000 TAPE	R622	0113725M	RESISTOR CARBON FILM SRD1/2P-B 100-J
R5D0	0195248R	RES 3216 CHIP 1/8 W 000 TAPE	R623	0700054M	RES.-CARBON FLM 1/16W 10K-JB
R5D1	0195250R	RES 2125 CHIP 1/16W 000 TAPE	R624	0700064M	RES.-CARBON FLM 1/16W 56K-JB
R5D2	0195250R	RES 2125 CHIP 1/16W 000 TAPE	R625	0700044M	RES.-CARBON FLM 1/16W 1.8K-JB
R5D3	0195248R	RES 3216 CHIP 1/8 W 000 TAPE	R626	0700058M	RES.-CARBON FLM 1/16W 22K-JB
R5D4	0195248R	RES 3216 CHIP 1/8 W 000 TAPE	R627	0100063M	RES.-CARBON FLM 1/8W 820-JB
R5D5	0195250R	RES 2125 CHIP 1/16W 000 TAPE	R628	0100065M	RES.-CARBON FLM 1/8W 1K-JB
R5D6	0195250R	RES 2125 CHIP 1/16W 000 TAPE	R629	0700064M	RES.-CARBON FLM 1/16W 56K-JB
R5D7	0700027M	RES.-CARBON FLM 1/16W 100-JB	R635	0700054M	RES.-CARBON FLM 1/16W 10K-JB
R5D8	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE	R636	0700061M	RES.-CARBON FLM 1/16W 33K-JB
R5E2	0700027M	RES.-CARBON FLM 1/16W 100-JB	R637	0700065M	RES.-CARBON FLM 1/16W 68K-JB
R5E3	0700027M	RES.-CARBON FLM 1/16W 100-JB	R638	0700038M	RES.-CARBON FLM 1/16W 680-JB
R5E4	0700027M	RES.-CARBON FLM 1/16W 100-JB	R639	0700064M	RES.-CARBON FLM 1/16W 56K-JB
R5E5	0195875R	RES 2125 CHIP 1/16W 100J TAPE	R640	0100045M	RES.-CARBON FLM 1/8W 150-JB
R5E6	0195875R	RES 2125 CHIP 1/16W 100J TAPE	R641	0119722M	RES.-METAL OXIDE FILM 1.0-JB/W
R5E7	0195875R	RES 2125 CHIP 1/16W 100J TAPE	R642	0119722M	RES.-METAL OXIDE FILM 1.0-JB/W
R5E8	0195875R	RES 2125 CHIP 1/16W 100J TAPE	R643	0700067M	RES.-CARBON FLM 1/16W 100K-JB
R5E9	0700027M	RES.-CARBON FLM 1/16W 100-JB	R644	0700067M	RES.-CARBON FLM 1/16W 100K-JB
R5F1	0195895R	RES.2125 CHIP 1/10W 680J TAPE	R645	0119731M	RES.-MTL 0X1DE 1W R68-K TAPE
R5F2	0195891R	RES 2125 CHIP 1/16W 470J TAPE	R646	0700054M	RES.-CARBON FLM 1/16W 10K-JB
R5F3	0195904R	RESISTOR 2125 CHIP 1/16W 1.5KJ TAPE	R647	0700059M	RES.-CARBON FLM 1/16W 27K-JB
R5F4	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE	R648	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB
R5F6	0195875R	RES 2125 CHIP 1/16W 100J TAPE	R649	0100053M	RES.-CARBON FLM 1/8W 330-JB
R5F7	0195875R	RES 2125 CHIP 1/16W 100J TAPE	R651	0114135M	RES.-CARBON FLM 1/4W 150-JB
R5F8	0195875R	RES 2125 CHIP 1/16W 100J TAPE	R652	0700014M	RES.-CARBON FLM 1/16W 10-J
R5F9	0195875R	RES 2125 CHIP 1/16W 100J TAPE	R660	0113725M	RESISTOR CARBON FILM SRD1/2P-B 100-J

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SYMBOL NO.	PART NO.	PART DESCRIPTION	SYMBOL NO.	PART NO.	PART DESCRIPTION
R661	0113725M	RESISTOR CARBON FILM SRD1/2P-B 100-J	R812	0100045M	RES.-CARBON FLM 1/8W 150-JB
R671	0113725M	RESISTOR CARBON FILM SRD1/2P-B 100-J	R815	0100063M	RES.-CARBON FLM 1/8W 820-JB
R672	0113766M	RESISTOR CARBON FILM SRD1/2P-B 4.7K-J	R817	0100041M	RES.-CARBON FLM 1/8W 100-JB
R673	AT03242S	METAL OX. 100OHM 1W	R818	0100049M	RES.-CARBON FLM 1/8W 220-JB
R675	0700061M	RES.-CARBON FLM 1/16W 33K-JB	R821	0100063M	RES.-CARBON FLM 1/8W 820-JB
R701	AT03599S	METAL OX. 2.7KOHM 3W	R822	0100049M	RES.-CARBON FLM 1/8W 220-JB
R702	AT03595S	METAL OX. 1.8KOHM 3W	R823	0100065M	RES.-CARBON FLM 1/8W 1K-JB
R704	0100031M	RES.-CARBON FLM 1/8W 39-JB	R825	0100021M	RES.-CARBON FLM 1/8W 15-JB
R705	0700034M	RES.-CARBON FLM 1/16W 330-JB	R827	0100065M	RES.-CARBON FLM 1/8W 1K-JB
R706	0700032M	RES.-CARBON FLM 1/16W 220-JB	R831	0140326S	RES. WIRE WOUND 5.6K-J 5W
R707	0113770M	RESISTOR CARBON FILM SRD1/2P-B 6.8K-J	R833	0113744M	RESISTOR CARBON FILM SRD1/2P-B 560-J
R708	0700058M	RES.-CARBON FLM 1/16W 22K-JB	R836	0113815M	RESISTOR CARBON FILM SRD1/2P-B 470K-J
R709	0700053M	RES.-CARBON FLM 1/16W 8.2K-JB	R840	0100051M	RES.-CARBON FLM 1/8W 270-JB
R710	0187066M	RES.-CARBON FLM 1/16W 1.1K-JB(AP90)	R841	0100057M	RES.-CARBON FLM 1/8W 470-JB
R710	0700042M	RES.-CARBON FLM 1/16W 1.2K-JB(AP91)	R842	0100033M	RES.-CARBON FLM 1/8W 47-JB
R711	0700048M	RES.-CARBON FLM 1/16W 3.9K-JB	R843	0150001	RESISTOR-VARIABLE CARBON RV08 200-B
R712	0700055M	RES.-CARBON FLM 1/16W 12K-JB(AP90)	R855	0100021M	RES.-CARBON FLM 1/8W 15-JB
R713	0113727M	RESISTOR CARBON FILM SRD1/2P-B 120-J	R861	0140326S	RES. WIRE WOUND 5.6K-J 5W
R714	AT03219S	METAL OX. 15.0OHM 1W	R863	0113744M	RESISTOR CARBON FILM SRD1/2P-B 560-J
⚠ R715	0700062M	RES.-CARBON FLM 1/16W 39K-JB	R866	0113815M	RESISTOR CARBON FILM SRD1/2P-B 470K-J
⚠ R716	0700049M	RES.-CARBON FLM 1/16W 4.7K-JB	R870	0100051M	RES.-CARBON FLM 1/8W 270-JB
R717	0113708M	RES CARB FILM SRD1/2P-B 20-J(AP90)	R871	0100057M	RES.-CARBON FLM 1/8W 470-JB
R717	0113717M	RES CARB FILM SRD1/2P-B 47-J(AP91)	R872	0100033M	RES.-CARBON FLM 1/8W 47-JB
R718	0113785M	RESISTOR CARBON FILM SRD1/2P-B 27K-J	R873	0150001	RESISTOR-VARIABLE CARBON RV08 200-B
R719	0113791M	RES.-CARBON FLM 1/2W 47K-JB	R885	0100021M	RES.-CARBON FLM 1/8W 15-JB
R720	AT03411S	METAL OX. 220OHM 2W	R901	AT03665M	RES.MTL GRAZD FLM 1/2W 1M
R721	0188122M	RES.-CARBON FLM 220-J 1/2W	R902	0147060	RES.-WIRE WOUND 2W 33-K
R722	0700067M	RES.-CARBON FLM 1/16W 100K-JB	R903	0114281M	RESISTOR-CARBON FILM SRD 1/4P 100K-J
R723	0700049M	RES.-CARBON FLM 1/16W 4.7K-JB	⚠ R904	0147802	RES.-WIRE WOUND 15W 0.62-KM
R725	AT03611S	METAL OX. 6.8KOHM 3W	R905	0113772M	RES.-CARBON FLM SRD1/2P-B
R726	0114183M	RESISTOR-CARBON FILM SRD 1/4 P 8.2K-J	R906	0113772M	RES.-CARBON FLM SRD1/2P-B
R727	0100091M	RES.-CARBON FLM 1/8W 12K-JB	R907	0100023M	RES.-CARBON FLM 1/8W 18-JB
R728	0100079M	RES.-CARBON FLM 1/8W 3.9K-JB	R908	0700053M	RES.-CARBON FLM 1/16W 8.2K-JB
R729	0114149M	RESISTOR-CARBON FILM SRD 1/4 PF 560-J	R909	0700038M	RES.-CARBON FLM 1/16W 680-JB
R730	0700054M	RES.-CARBON FLM 1/16W 10K-JB	R910	0700043M	RES.-CARBON FLM 1/16W 1.5K-JB
R731	0100127M	RES.-CARBON FLM 1/8W 390K-JB	R911	0700046M	RES.-CARBON FLM 1/16W 2.7K-JB
R732	AT03251S	METAL OX. 220OHM 1W	R912	0700047M	RES.-CARBON FLM 1/16W 3.3K-JB
R733	AT03251S	METAL OX. 220OHM 1W	R913	0700023M	RES.-CARBON FLM 1/16W 47-J
R734	0100127M	RES.-CARBON FLM 1/8W 390K-JB	R914	0700054M	RES.-CARBON FLM 1/16W 10K-JB
⚠ R737	0114041M	RESISTOR-CARBON FILM SRD 1/4P 10J	R915	0700042M	RES.-CARBON FLM 1/16W 1.2K-JB
R740	0100117M	RES.-CARBON FLM 1/8W 150K-JB	R916	0700038M	RES.-CARBON FLM 1/16W 680-JB
R750	0700052M	RES.-CARBON FLM 1/16W 6.8K-JB	R917	AT01531S	METAL FILM RESISTOR(0.1OHM1/2W)
R751	0700048M	RES.-CARBON FLM 1/16W 3.9K-JB	R918	0100091M	RES.-CARBON FLM 1/8W 12K-JB
R752	0700067M	RES.-CARBON FLM 1/16W 100K-JB	R919	0100089M	RES.-CARBON FLM 1/8W 10K-JB
R753	0700045M	RES.-CARBON FLM 1/16W 2.2K-JB	R920	0700047M	RES.-CARBON FLM 1/16W 3.3K-JB
R760	AT03417S	METAL OX. 390OHM 2W	R921	0700047M	RES.-CARBON FLM 1/16W 3.3K-JB
R761	0114177M	RESISTOR-CARBON FILM SRD 1/4 P 4.7K-J	R922	0700058M	RES.-CARBON FLM 1/16W 22K-JB
R770	0700054M	RES.-CARBON FLM 1/16W 10K-JB	R923	0700057M	RES.-CARBON FLM 1/16W 18K-JB
R771	0700047M	RES.-CARBON FLM 1/16W 3.3K-JB	R925	0113746M	RES.-CARBON FLM 1/2W 680-JB
R772	0700055M	RES.-CARBON FLM 1/16W 12K-JB	R926	0700057M	RES.-CARBON FLM 1/16W 18K-JB
R773	0700042M	RES.-CARBON FLM 1/16W 1.2K-JB	R929	0700028M	RES.-CARBON FLM 1/16W 120-JB
R801	0140326S	RES. WIRE WOUND 5.6K-J 5W	R930	0700046M	RES.-CARBON FLM 1/16W 2.7K-JB
R803	0113744M	RESISTOR CARBON FILM SRD1/2P-B 560-J	R931	0119695M	RES.-MTL OXIDE FLM 1W 0.47-F
R806	0113815M	RESISTOR CARBON FILM SRD1/2P-B 470K-J	R932	0700054M	RES.-CARBON FLM 1/16W 10K-JB
R810	0100051M	RES.-CARBON FLM 1/8W 270-JB	R933	0700058M	RES.-CARBON FLM 1/16W 22K-JB
R811	0100057M	RES.-CARBON FLM 1/8W 470-JB	R934	0113797M	RES.-CARBON FLM 1/2W 82K-JB

REPLACEMENT PARTS LIST

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SYMBOL NO.	PART NO.	PART DESCRIPTION	SYMBOL NO.	PART NO.	PART DESCRIPTION
R935	0700049M	RES.-CARBON FLM 1/16W 4.7K-JB	RA16	0195248R	RES 3216 CHIP 1/8 W 000 TAPE
R937	0700047M	RES.-CARBON FLM 1/16W 3.3K-JB	RA17	0195250R	RES 2125 CHIP 1/16W 000 TAPE
R940	0700054M	RES.-CARBON FLM 1/16W 10K-JB	RA18	0195939R	RMC73S-2A393JR
R941	0700018M	RES.-CARBON FLM 1/16W 22-J	RA19	0195925R	RES 2125 CHIP 1/16W 10KJ TAPE
R942	0700042M	RES.-CARBON FLM 1/16W 1.2K-JB	RA20	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE
R943	0700043M	RES.-CARBON FLM 1/16W 1.5K-JB	RA21	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE
R944	0113793M	RESISTOR CARBON FILM SRD1/2P-B 56K-J	RA22	0195887R	RES 2125 CHIP 1/16W 330J TAPE
R945	0113793M	RESISTOR CARBON FILM SRD1/2P-B 56K-J	RA23	0195883R	RES 2125 CHIP 1/16W 220J TAPE
R946	0114205M	RESISTOR-CARBON FILM SRD 1/4 P 15K-J	RA24	0195939R	RMC73S-2A393JR
R948	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB	RA25	0195925R	RES 2125 CHIP 1/16W 10KJ TAPE
⚠ R949	0700043M	RES.-CARBON FLM 1/16W 1.5K-JB	RA26	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE
⚠ R950	0700039M	RES.-CARBON FLM 1/16W 820-JB	RA27	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE
R952	0700032M	RES.-CARBON FLM 1/16W 220-JB	RA28	0195887R	RES 2125 CHIP 1/16W 330J TAPE
R954	0700058M	RES.-CARBON FLM 1/16W 22K-JB	RA29	0195883R	RES 2125 CHIP 1/16W 220J TAPE
R955	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB	RA30	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE
R957	0700047M	RES.-CARBON FLM 1/16W 3.3K-JB	RA31	0195950R	RES 2125 CHIP 1/16W 100KJ TAPE
R958	0700057M	RES.-CARBON FLM 1/16W 18K-JB	RA32	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE
R959	0113750M	RES.-CARBON FLM 1/2W 1K-JB	RA33	0195950R	RES 2125 CHIP 1/16W 100KJ TAPE
R960	0700054M	RES.-CARBON FLM 1/16W 10K-JB	RA34	0195250R	RES 2125 CHIP 1/16W 000 TAPE
R962	0700067M	RES.-CARBON FLM 1/16W 100K-JB	RA35	0195250R	RES 2125 CHIP 1/16W 000 TAPE
R963	0700051M	RES.-CARBON FLM 1/16W 5.6K-JB	RA36	0195250R	RES 2125 CHIP 1/16W 000 TAPE
R968	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB	RA37	0195250R	RES 2125 CHIP 1/16W 000 TAPE
R969	0700067M	RES.-CARBON FLM 1/16W 100K-JB	RA40	0195248R	RES 3216 CHIP 1/8 W 000 TAPE
R970	0700051M	RES.-CARBON FLM 1/16W 5.6K-JB	RA41	0195250R	RES 2125 CHIP 1/16W 000 TAPE
R971	0700037M	RES.-CARBON FLM 1/16W 560-JB	RA42	0195250R	RES 2125 CHIP 1/16W 000 TAPE
R972	0700049M	RES.-CARBON FLM 1/16W 4.7K-JB	RA43	0195248R	RES 3216 CHIP 1/8 W 000 TAPE
R974	0700047M	RES.-CARBON FLM 1/16W 3.3K-JB	RA50	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE
R975	AT03419S	METAL OX. 470 OHM 2W	RA51	0195950R	RES 2125 CHIP 1/16W 100KJ TAPE
R976	0700047M	RES.-CARBON FLM 1/16W 3.3K-JB	RA52	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE
R977	0700063M	RES.-CARBON FLM 1/16W 47K-JB	RA53	0195950R	RES 2125 CHIP 1/16W 100KJ TAPE
R979	0113762M	RESISTOR CARBON FILM SRD1/2P-B 3.3K-J	RA58	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE
R980	0700054M	RES.-CARBON FLM 1/16W 10K-JB	RA59	0195950R	RES 2125 CHIP 1/16W 100KJ TAPE
R981	0700054M	RES.-CARBON FLM 1/16W 10K-JB	RA60	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE
R982	0700048M	RES.-CARBON FLM 1/16W 3.9K-JB	RA61	0195950R	RES 2125 CHIP 1/16W 100KJ TAPE
R983	0700054M	RES.-CARBON FLM 1/16W 10K-JB	RA64	0195960R	RESISTOR MINI-CHIP RMC1/16 270K-J TAPE
R985	0700058M	RES.-CARBON FLM 1/16W 22K-JB	RA65	0195960R	RESISTOR MINI-CHIP RMC1/16 270K-J TAPE
R986	AT01531S	METAL FILM RESISTOR(0.1OHM1/2W)	RA66	0195960R	RESISTOR MINI-CHIP RMC1/16 270K-J TAPE
R987	AT01531S	METAL FILM RESISTOR(0.1OHM1/2W)	RA67	0195960R	RESISTOR MINI-CHIP RMC1/16 270K-J TAPE
R988	0113744M	RESISTOR CARBON FILM SRD1/2P-B 560-J	RA68	0195250R	RES 2125 CHIP 1/16W 000 TAPE
R989	0700036M	RES.-CARBON FLM 1/16W 470-JB	RA69	0195248R	RES 3216 CHIP 1/8 W 000 TAPE
R990	0700058M	RES.-CARBON FLM 1/16W 22K-JB	RA70	0195250R	RES 2125 CHIP 1/16W 000 TAPE
R992	AT03608S	METAL OX. 5.6KOHM 3W	RA75	0195248R	RES 3216 CHIP 1/8 W 000 TAPE
R993	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB	RA76	0195250R	RES 2125 CHIP 1/16W 000 TAPE
RA01	0195918R	RES 2125 CHIP 1/16W 5.6KJ TAPE	RA77	0195250R	RES 2125 CHIP 1/16W 000 TAPE
RA02	0195918R	RES 2125 CHIP 1/16W 5.6KJ TAPE	RA78	0195248R	RES 3216 CHIP 1/8 W 000 TAPE
RA05	0195918R	RES 2125 CHIP 1/16W 5.6KJ TAPE	RA79	0195248R	RES 3216 CHIP 1/8 W 000 TAPE
RA06	0195918R	RES 2125 CHIP 1/16W 5.6KJ TAPE	RA80	0195250R	RES 2125 CHIP 1/16W 000 TAPE
RA07	0195918R	RES 2125 CHIP 1/16W 5.6KJ TAPE	RA81	0195250R	RES 2125 CHIP 1/16W 000 TAPE
RA08	0195918R	RES 2125 CHIP 1/16W 5.6KJ TAPE	RA82	0195248R	RES 3216 CHIP 1/8 W 000 TAPE
RA09	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB	RA83	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE
RA10	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB	RA84	0195950R	RES 2125 CHIP 1/16W 100KJ TAPE
RA11	0700027M	RES.-CARBON FLM 1/16W 100-JB	RA85	0195925R	RES 2125 CHIP 1/16W 10KJ TAPE
RA12	0700027M	RES.-CARBON FLM 1/16W 100-JB	RA86	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE
RA13	0195250R	RES 2125 CHIP 1/16W 000 TAPE	RA91	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE
RA14	0195248R	RES 3216 CHIP 1/8 W 000 TAPE	RA92	0195950R	RES 2125 CHIP 1/16W 100KJ TAPE
RA15	0195248R	RES 3216 CHIP 1/8 W 000 TAPE	RA93	0195925R	RES 2125 CHIP 1/16W 10KJ TAPE

REPLACEMENT PARTS LIST

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SYMBOL NO.	PART NO.	PART DESCRIPTION	SYMBOL NO.	PART NO.	PART DESCRIPTION
RA94	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE	RE36	0113686M	RES.-CARBON FLM 1/2W 2.7-J
RA99	0195248R	RES 3216 CHIP 1/8 W 000 TAPE	RE37	0113704M	RESISTOR CARBON FILM SRD1/2P-B 13-J
RAA1	0195248R	RES 3216 CHIP 1/8 W 000 TAPE	RE38	AT03254S	METAL OX. 300OHM 1W
RAA2	0195248R	RES 3216 CHIP 1/8 W 000 TAPE	RE39	0700054M	RES.-CARBON FLM 1/16W 10K-JB
RAA3	0195248R	RES 3216 CHIP 1/8 W 000 TAPE	RE40	0700046M	RES.-CARBON FLM 1/16W 2.7K-JB
RAA4	0195248R	RES 3216 CHIP 1/8 W 000 TAPE	RE41	0700035M	RES.-CARBON FLM 1/16W 390-JB
RAA5	0195248R	RES 3216 CHIP 1/8 W 000 TAPE	RE43	0700039M	RES.-CARBON FLM 1/16W 820-JB
RAA6	0195248R	RES 3216 CHIP 1/8 W 000 TAPE	RE45	0700027M	RES.-CARBON FLM 1/16W 100-JB
RAA7	0195248R	RES 3216 CHIP 1/8 W 000 TAPE	RE46	0113746M	RES.-CARBON FLM 1/2W 680-JB
RAD8	0195875R	RES 2125 CHIP 1/16W 100J TAPE	RE47	0700054M	RES.-CARBON FLM 1/16W 10K-JB
RAD9	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE	RF01	0700058M	RES.-CARBON FLM 1/16W 22K-JB
RAE1	0195950R	RES 2125 CHIP 1/16W 100KJ TAPE	RF02	0700059M	RES.-CARBON FLM 1/16W 27K-JB
RAE2	0700051M	RES.-CARBON FLM 1/16W 5.6K-JB	RF03	0700036M	RES.-CARBON FLM 1/16W 470-JB
RAE3	0195960R	RESISTOR MINI-CHIP RMC1/16 270K-J TAPE	RF04	0700049M	RES.-CARBON FLM 1/16W 4.7K-JB
RC02	0195875R	RES 2125 CHIP 1/16W 100J TAPE	RF07	0700067M	RES.-CARBON FLM 1/16W 100K-JB
RC14	0195250R	RES 2125 CHIP 1/16W 000 TAPE(AP91)	RF08	0700056M	RES.-CARBON FLM 1/16W 15K-JB
RC16	0195871R	RMC73S-2A750JR	RF09	0700054M	RES.-CARBON FLM 1/16W 10K-JB
RC18	0195875R	RES 2125 CHIP 1/16W 100J TAPE	RF10	0700042M	RES.-CARBON FLM 1/16W 1.2K-JB
RC19	0195871R	RMC73S-2A750JR	RF11	0700045M	RES.-CARBON FLM 1/16W 2.2K-JB
RC63	0195248R	RES 3216 CHIP 1/8 W 000 TAPE	RF12	0700067M	RES.-CARBON FLM 1/16W 100K-JB
RC89	0195250R	RES 2125 CHIP 1/16W 000 TAPE	RF13	0700056M	RES.-CARBON FLM 1/16W 15K-JB
RC98	0195250R	RES 2125 CHIP 1/16W 000 TAPE	RF14	0700025M	RES.-CARBON FLM 1/16W 68-J
RE01	AT03584S	METAL OX. 680OHM 3W	RF15	AT03659M	RES.MTL GRAZD FLM 1/2W 390K
RE02	0700066M	RES.-CARBON FLM 1/16W 82K-JB	RF16	AT03659M	RES.MTL GRAZD FLM 1/2W 390K
RE03	0700057M	RES.-CARBON FLM 1/16W 18K-JB	RF17	AT03659M	RES.MTL GRAZD FLM 1/2W 390K
RE04	0700035M	RES.-CARBON FLM 1/16W 390-JB	RF18	AT03662M	RES.MTL GRAZD FLM 1/2W 560K
RE05	0700042M	RES.-CARBON FLM 1/16W 1.2K-JB	RF19	AT03662M	RES.MTL GRAZD FLM 1/2W 560K
RE06	0700031M	RES.-CARBON FLM 1/16W 180-JB	RF20	0700027M	RES.-CARBON FLM 1/16W 100-JB
RE07	0700065M	RES.-CARBON FLM 1/16W 68K-JB	RF21	0700049M	RES.-CARBON FLM 1/16W 4.7K-JB
RE08	0700059M	RES.-CARBON FLM 1/16W 27K-JB	RF22	0700057M	RES.-CARBON FLM 1/16W 18K-JB
RE09	0700039M	RES.-CARBON FLM 1/16W 820-JB	RF23	0700063M	RES.-CARBON FLM 1/16W 47K-JB
RE10	0700033M	RES.-CARBON FLM 1/16W 270-JB	RF25	AT03662M	RES.MTL GRAZD FLM 1/2W 560K
RE11	0700033M	RES.-CARBON FLM 1/16W 270-JB	RF26	AT03662M	RES.MTL GRAZD FLM 1/2W 560K
RE12	0700045M	RES.-CARBON FLM 1/16W 2.2K-JB	RF27	AT03661M	RES.MTL GRAZD FLM 1/2W 470K
RE13	0700058M	RES.-CARBON FLM 1/16W 22K-JB	RF28	0700062M	RES.-CARBON FLM 1/16W 39K-JB
RE14	0700067M	RES.-CARBON FLM 1/16W 100K-JB	RF29	0700043M	RES.-CARBON FLM 1/16W 1.5K-JB
RE15	0700046M	RES.-CARBON FLM 1/16W 2.7K-JB	RF30	0100103M	RES.-CARBON FLM 1/8W 39K-JB
RE16	0113742M	RES.-CARBON FLM 1/2W 470-JB	RF31	0700044M	RES.-CARBON FLM 1/16W 1.8K-JB
RE18	0700036M	RES.-CARBON FLM 1/16W 470-JB	RF33	0700054M	RES.-CARBON FLM 1/16W 10K-JB
RE19	0700067M	RES.-CARBON FLM 1/16W 100K-JB	RF34	0187100M	RES.-CARBON FLM 1/16W 30K-JB
RE20	0700054M	RES.-CARBON FLM 1/16W 10K-JB	RF35	0187074M	RES.-CARBON FLM 1/16W 2.4K-JB
RE21	0100065M	RES.-CARBON FLM 1/8W 1K-JB	RF36	0700054M	RES.-CARBON FLM 1/16W 10K-JB
RE22	0700027M	RES.-CARBON FLM 1/16W 100-JB	RF37	0700039M	RES.-CARBON FLM 1/16W 820-JB
RE23	0113701M	RESISTOR CARBON FILM SRD1/2P-B 10-J	RF40	AT03241S	METAL OX. 91.0OHM 1W
RE24	0100039M	RES.-CARBON FLM 1/8W 82-JB	RF41	0700047M	RES.-CARBON FLM 1/16W 3.3K-JB
RE25	0188133M	RES.-CARBON FLM 1/2W 1.5K-JB	RF42	0700053M	RES.-CARBON FLM 1/16W 8.2K-JB
RE26	0188132M	RES.-CARBON FLM 1.2K-J 1/2W	RF43	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB
RE27	0188155M	RES.-CARBON FLM 68K-JB	RF44	0700061M	RES.-CARBON FLM 1/16W 33K-JB
RE28	0188155M	RES.-CARBON FLM 68K-JB	RF45	0700049M	RES.-CARBON FLM 1/16W 4.7K-JB
RE29	0113776M	RESISTOR CARBON FILM SRD1/2P-B 12K-J	RF46	0700054M	RES.-CARBON FLM 1/16W 10K-JB
RE30	0100039M	RES.-CARBON FLM 1/8W 82-JB	RF47	0700054M	RES.-CARBON FLM 1/16W 10K-JB
RE31	0100069M	RES.-CARBON FLM 1/8W 1.5K-JB	RK34	0700063M	RES.-CARBON FLM 1/16W 47K-JB
RE32	0100067M	RES.-CARBON FLM 1/8W 1.2K-JB	RK35	0700063M	RES.-CARBON FLM 1/16W 47K-JB
RE33	0113704M	RESISTOR CARBON FILM SRD1/2P-B 13-J	RK36	0700063M	RES.-CARBON FLM 1/16W 47K-JB
RE34	AT03571S	METAL OX. 220OHM 3W	RK37	0700063M	RES.-CARBON FLM 1/16W 47K-JB
RE35	0113686M	RES.-CARBON FLM 1/2W 2.7-J	RK38	0700063M	RES.-CARBON FLM 1/16W 47K-JB

REPLACEMENT PARTS LIST

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SYMBOL NO.	PART NO.	PART DESCRIPTION
RK39	0700063M	RES.-CARBON FLM 1/16W 47K-JB
RK40	0700047M	RES.-CARBON FLM 1/16W 3.3K-JB
RK42	AT03202S	METAL OX. 3.3OHM 1W
RK43	AT03571S	METAL OX. 220OHM 3W
RK44	0700047M	RES.-CARBON FLM 1/16W 3.3K-JB
RK46	AT03197S	METAL OX. 2.2OHM 1W
RK47	AT03566S	METAL OX. 150OHM 3W
RK48	0700047M	RES.-CARBON FLM 1/16W 3.3K-JB
RK50	AT03202S	METAL OX. 3.3OHM 1W
RK51	AT03571S	METAL OX. 220OHM 3W
RK52	0700047M	RES.-CARBON FLM 1/16W 3.3K-JB
RK54	AT03204S	METAL OX. 3.9OHM 1W
RK55	AT03566S	METAL OX. 150OHM 3W
RK56	0700047M	RES.-CARBON FLM 1/16W 3.3K-JB
RK58	AT03202S	METAL OX. 3.3OHM 1W
RK59	AT03571S	METAL OX. 220OHM 3W
RK60	0700047M	RES.-CARBON FLM 1/16W 3.3K-JB
RK62	AT03197S	METAL OX. 2.2OHM 1W
RK63	AT03566S	METAL OX. 150OHM 3W
RK65	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB
RK67	0700057M	RES.-CARBON FLM 1/16W 18K-JB
RK68	0700047M	RES.-CARBON FLM 1/16W 3.3K-JB
RK69	0700062M	RES.-CARBON FLM 1/16W 39K-JB
RK70	0700057M	RES.-CARBON FLM 1/16W 18K-JB
RK71	0700046M	RES.-CARBON FLM 1/16W 2.7K-JB
RK72	0700062M	RES.-CARBON FLM 1/16W 39K-JB
RK73	0700057M	RES.-CARBON FLM 1/16W 18K-JB
RK74	0700047M	RES.-CARBON FLM 1/16W 3.3K-JB
RK75	0700062M	RES.-CARBON FLM 1/16W 39K-JB
RK76	0700057M	RES.-CARBON FLM 1/16W 18K-JB
RK77	0700049M	RES.-CARBON FLM 1/16W 4.7K-JB
RK78	0700062M	RES.-CARBON FLM 1/16W 39K-JB
RK79	0700032M	RES.-CARBON FLM 1/16W 220-JB
RK80	0700032M	RES.-CARBON FLM 1/16W 220-JB
RK81	0700032M	RES.-CARBON FLM 1/16W 220-JB
RK82	0700032M	RES.-CARBON FLM 1/16W 220-JB
RK83	0700032M	RES.-CARBON FLM 1/16W 220-JB
RK84	0700032M	RES.-CARBON FLM 1/16W 220-JB
RK85	0700032M	RES.-CARBON FLM 1/16W 220-JB
RK86	0700032M	RES.-CARBON FLM 1/16W 220-JB
RK87	0700032M	RES.-CARBON FLM 1/16W 220-JB
RK88	0700032M	RES.-CARBON FLM 1/16W 220-JB
RK89	0700051M	RES.-CARBON FLM 1/16W 5.6K-JB
RK92	0700047M	RES.-CARBON FLM 1/16W 3.3K-JB
RK93	0700051M	RES.-CARBON FLM 1/16W 5.6K-JB
RK94	0700048M	RES.-CARBON FLM 1/16W 3.9K-JB
RK95	0700051M	RES.-CARBON FLM 1/16W 5.6K-JB
RK96	0700055M	RES.-CARBON FLM 1/16W 12K-JB
RK97	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB
RK98	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB
RK99	0113698M	RES.-CARBON FLM 1/2W 8.2-J
RKA1	0100066M	RES.-CARBON FLM 1/8W 1.1K-JB
RKA2	0100069M	RES.-CARBON FLM 1/8W 1.5K-JB
RKA3	0700054M	RES.-CARBON FLM 1/16W 10K-JB
RKA4	0700058M	RES.-CARBON FLM 1/16W 22K-JB
RKA5	0700058M	RES.-CARBON FLM 1/16W 22K-JB
RKA6	0700043M	RES.-CARBON FLM 1/16W 1.5K-JB
RKA7	0700049M	RES.-CARBON FLM 1/16W 4.7K-JB
RKA8	0700051M	RES.-CARBON FLM 1/16W 5.6K-JB
RKE1	0700063M	RES.-CARBON FLM 1/16W 47K-JB
RKE2	0700049M	RES.-CARBON FLM 1/16W 4.7K-JB
RKE3	0100125M	RES.-CARBON FLM 1/8W 330K-JB
RM01	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB
RM02	0700058M	RES.-CARBON FLM 1/16W 22K-JB
RM03	0700045M	RES.-CARBON FLM 1/16W 2.2K-JB
RM04	0100065M	RES.-CARBON FLM 1/8W 1K-JB
RM05	0100065M	RES.-CARBON FLM 1/8W 1K-JB
RM06	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB
RM07	0700043M	RES.-CARBON FLM 1/16W 1.5K-JB
RM08	0700046M	RES.-CARBON FLM 1/16W 2.7K-JB
RM09	0700049M	RES.-CARBON FLM 1/16W 4.7K-JB
RM10	0100129M	RES.-CARBON FLM 1/8W 470K-JB
RM11	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB
RM12	0100125M	RES.-CARBON FLM 1/8W 330K-JB
RM13	0188127M	RES.-CARBON FLM 560-JB 1/2W
RM14	0100125M	RES.-CARBON FLM 1/8W 330K-JB
RM15	0700054M	RES.-CARBON FLM 1/16W 10K-JB
RM40	0700067M	RES.-CARBON FLM 1/16W 100K-JB
RN01	0700057M	RES.-CARBON FLM 1/16W 18K-JB
RN02	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB
RN03	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB
RN04	0100113M	RES.-CARBON FLM 1/8W 100K-JB
RN05	0700052M	RES.-CARBON FLM 1/16W 6.8K-JB
RN06	0700054M	RES.-CARBON FLM 1/16W 10K-JB
RN07	0700051M	RES.-CARBON FLM 1/16W 5.6K-JB
RN08	0700044M	RES.-CARBON FLM 1/16W 1.8K-JB
RN09	0700061M	RES.-CARBON FLM 1/16W 33K-JB
RN10	0700057M	RES.-CARBON FLM 1/16W 18K-JB
RN11	0700058M	RES.-CARBON FLM 1/16W 22K-JB
RN12	0700051M	RES.-CARBON FLM 1/16W 5.6K-JB
RN13	0700054M	RES.-CARBON FLM 1/16W 10K-JB
RN14	0700054M	RES.-CARBON FLM 1/16W 10K-JB
RN15	0700064M	RES.-CARBON FLM 1/16W 56K-JB
RN16	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB
RN17	0700059M	RES.-CARBON FLM 1/16W 27K-JB
RN18	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB
RS12	0700051M	RES.-CARBON FLM 1/16W 5.6K-JB
RS13	0700049M	RES.-CARBON FLM 1/16W 4.7K-JB
RS14	0700051M	RES.-CARBON FLM 1/16W 5.6K-JB
RS15	0700049M	RES.-CARBON FLM 1/16W 4.7K-JB
RS32	0700049M	RES.-CARBON FLM 1/16W 4.7K-JB
RS33	0700056M	RES.-CARBON FLM 1/16W 15K-JB
RS34	AT03665M	RES.MTL GRAZD FLM 1/2W 1M
RS35	AT03666M	RES.MTL GRAZD FLM 1/2W 1.2M
RS42	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB
RS47	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB
RS48	0700054M	RES.-CARBON FLM 1/16W 10K-JB
RSH4	0700054M	RES.-CARBON FLM 1/16W 10K-JB
RT01	0700027M	RES.-CARBON FLM 1/16W 100-JB
RT02	0700051M	RES.-CARBON FLM 1/16W 5.6K-JB
RT03	0700027M	RES.-CARBON FLM 1/16W 100-JB
RT04	0700054M	RES.-CARBON FLM 1/16W 10K-JB

REPLACEMENT PARTS LIST

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SYMBOL NO.	PART NO.	PART DESCRIPTION	SYMBOL NO.	PART NO.	PART DESCRIPTION
RT07	0700049M	RES.-CARBON FLM 1/16W 4.7K-JB	RT69	0700058M	RES.-CARBON FLM 1/16W 22K-JB
RT08	0700046M	RES.-CARBON FLM 1/16W 2.7K-JB	RT70	0700044M	RES.-CARBON FLM 1/16W 1.8K-JB
RT09	0700057M	RES.-CARBON FLM 1/16W 18K-JB	RT71	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB
RT10	0700054M	RES.-CARBON FLM 1/16W 10K-JB	RT72	0700051M	RES.-CARBON FLM 1/16W 5.6K-JB
RT11	0700045M	RES.-CARBON FLM 1/16W 2.2K-JB	RT73	0700044M	RES.-CARBON FLM 1/16W 1.8K-JB
RT12	0700062M	RES.-CARBON FLM 1/16W 39K-JB(AP90)	RT74	0700044M	RES.-CARBON FLM 1/16W 1.8K-JB
RT12	0700065M	RES.-CARBON FLM 1/16W 68K-JB(AP91)	RT75	0700052M	RES.-CARBON FLM 1/16W 6.8K-JB
RT13	0700054M	RES.-CARBON FLM 1/16W 10K-JB	RT76	0700054M	RES.-CARBON FLM 1/16W 10K-JB
RT14	0187080M	RES.-CARBON FLM 1/16W 4.3K-JB	RT77	0700067M	RES.-CARBON FLM 1/16W 100K-JB
RT15	0187072M	RES.-CARBON FLM 1/16W 2.0K-JB	RT78	0100081M	RES.-CARBON FLM 1/8W 4.7K-JB
RT16	0100087M	RES.-CARBON FLM 1/8W 8.2K-JB	RT79	0700052M	RES.-CARBON FLM 1/16W 6.8K-JB
RT17	0100121M	RES.-CARBON FLM 1/8W 220K-JB	RT80	0700054M	RES.-CARBON FLM 1/16W 10K-JB
RT18	0188131M	RES.-CARBON FLM 1/4W 1K-JB	RT81	0700067M	RES.-CARBON FLM 1/16W 100K-JB
RT19	0700049M	RES.-CARBON FLM 1/16W 4.7K-JB	RT82	0700042M	RES.-CARBON FLM 1/16W 1.2K-JB
RT20	0700061M	RES.-CARBON FLM 1/16W 33K-JB	RT83	0700047M	RES.-CARBON FLM 1/16W 3.3K-JB
RT21	0100075M	RES.-CARBON FLM 1/8W 2.7K-JB	RT85	0700062M	RES.-CARBON FLM 1/16W 39K-JB(AP90)
RT22	0700038M	RES.-CARBON FLM 1/16W 680-JB	RT85	0700067M	RES.-CARBON FLM 1/16W 100K-JB(AP91)
RT23	0700056M	RES.-CARBON FLM 1/16W 15K-JB	RT86	0700047M	RES.-CARBON FLM 1/16W 3.3K-JB
RT24	0188139M	RES.-CARBON FLM 4.7K-J 1/2W	RT87	0700052M	RES.-CARBON FLM 1/16W 6.8K-JB(AP90)
RT25	0700042M	RES.-CARBON FLM 1/16W 1.2K-JB	RT87	0700055M	RES.-CARBON FLM 1/16W 12K-JB(AP91)
RT26	AW00105	TRIMMER RESISTOR	RT91	0700047M	RES.-CARBON FLM 1/16W 3.3K-JB
RT27	0700067M	RES.-CARBON FLM 1/16W 100K-JB	RT92	0700053M	RES.-CARBON FLM 1/16W 8.2K-JB(AP90)
RT28	0700055M	RES.-CARBON FLM 1/16W 12K-JB	RT92	0700057M	RES.-CARBON FLM 1/16W 18K-JB(AP91)
RT29	0100121M	RES.-CARBON FLM 1/8W 220K-JB	RT94	0700047M	RES.-CARBON FLM 1/16W 3.3K-JB(AP90)
RT30	0187068M	RES.-CARBON FLM 1/16W 1.3K-JB	RT95	0700062M	RES.-CARBON FLM 1/16W 39K-JB(AP90)
RT31	0700047M	RES.-CARBON FLM 1/16W 3.3K-JB	RT97	0700047M	RES.-CARBON FLM 1/16W 3.3K-JB
RT32	0700044M	RES.-CARBON FLM 1/16W 1.8K-JB	RT98	0700059M	RES.-CARBON FLM 1/16W 27K-JB
RT33	0700062M	RES.-CARBON FLM 1/16W 39K-JB	RTA3	0700055M	RES.-CARBON FLM 1/16W 12K-JB
RT34	0700049M	RES.-CARBON FLM 1/16W 4.7K-JB	RTA4	0700047M	RES.-CARBON FLM 1/16W 3.3K-JB
RT35	0700055M	RES.-CARBON FLM 1/16W 12K-JB	RTA6	0700062M	RES.-CARBON FLM 1/16W 39K-JB(AP90)
RT36	0700054M	RES.-CARBON FLM 1/16W 10K-JB	RTA6	0700065M	RES.-CARBON FLM 1/16W 68K-JB(AP91)
RT37	0700055M	RES.-CARBON FLM 1/16W 12K-JB	RTA7	0700067M	RES.-CARBON FLM 1/16W 100K-JB
RT38	0700053M	RES.-CARBON FLM 1/16W 8.2K-JB	RTA8	0700055M	RES.-CARBON FLM 1/16W 12K-JB
RT39	0700057M	RES.-CARBON FLM 1/16W 18K-JB	RTA9	0700061M	RES.-CARBON FLM 1/16W 33K-JB
RT40	0700054M	RES.-CARBON FLM 1/16W 10K-JB	RTE1	0700067M	RES.-CARBON FLM 1/16W 100K-JB
RT41	0700063M	RES.-CARBON FLM 1/16W 47K-JB	RTE2	0700058M	RES.-CARBON FLM 1/16W 22K-JB
RT42	0700063M	RES.-CARBON FLM 1/16W 47K-JB	RTE3	0700061M	RES.-CARBON FLM 1/16W 33K-JB
RT44	0700039M	RES.-CARBON FLM 1/16W 820-JB	RTE4	0700063M	RES.-CARBON FLM 1/16W 47K-JB
RT45	0700052M	RES.-CARBON FLM 1/16W 6.8K-JB	RTE5	0700063M	RES.-CARBON FLM 1/16W 47K-JB
RT46	0700054M	RES.-CARBON FLM 1/16W 10K-JB	RTE6	0700067M	RES.-CARBON FLM 1/16W 100K-JB
RT50	0187112M	RES.-CARBON FLM 1/16W 91K-JB	RTE7	0700059M	RES.-CARBON FLM 1/16W 27K-JB(AP91)
RT51	0700066M	RES.-CARBON FLM 1/16W 82K-JB	RTE7	0700061M	RES.-CARBON FLM 1/16W 33K-JB(AP90)
RT52	0187104M	RES.-CARBON FLM 1/16W 43K-JB	RTE8	0700063M	RES.-CARBON FLM 1/16W 47K-JB
RT53	0700045M	RES.-CARBON FLM 1/16W 2.2K-JB	RTE9	0700063M	RES.-CARBON FLM 1/16W 47K-JB
RT57	0700067M	RES.-CARBON FLM 1/16W 100K-JB	RTF1	0700054M	RES.-CARBON FLM 1/16W 10K-JB
RT58	0100121M	RES.-CARBON FLM 1/8W 220K-JB	RTF2	0700062M	RES.-CARBON FLM 1/16W 39K-JB
RT59	0100124M	RES.-CARBON FLM 1/8W 300K-JB	RTF3	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB
RT60	0700055M	RES.-CARBON FLM 1/16W 12K-JB	RTF4	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB
RT61	0700053M	RES.-CARBON FLM 1/16W 8.2K-JB	RTF5	0700049M	RES.-CARBON FLM 1/16W 4.7K-JB
RT62	0187098M	RES.-CARBON FLM 1/16W 24K-JB	RTF6	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB
RT63	0700066M	RES.-CARBON FLM 1/16W 82K-JB	RTF7	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB
RT64	0700054M	RES.-CARBON FLM 1/16W 10K-JB	RTF8	0700049M	RES.-CARBON FLM 1/16W 4.7K-JB
RT65	0700052M	RES.-CARBON FLM 1/16W 6.8K-JB	RTF9	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB
RT66	0700067M	RES.-CARBON FLM 1/16W 100K-JB	RTG1	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB
RT67	0188131M	RES.-CARBON FLM 1/4W 1K-JB	RTG2	0700049M	RES.-CARBON FLM 1/16W 4.7K-JB
RT68	0700049M	RES.-CARBON FLM 1/16W 4.7K-JB	RTG3	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB

REPLACEMENT PARTS LIST

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SYMBOL NO.	PART NO.	PART DESCRIPTION	SYMBOL NO.	PART NO.	PART DESCRIPTION
RTG4	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB	RU25	AW00105	TRIMMER RESISTOR
RTG5	0700049M	RES.-CARBON FLM 1/16W 4.7K-JB	RU26	0700046M	RES.-CARBON FLM 1/16W 2.7K-JB
RTG6	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB	RU27	0700053M	RES.-CARBON FLM 1/16W 8.2K-JB
RTG7	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB	RU28	0700052M	RES.-CARBON FLM 1/16W 6.8K-JB
RTG8	0700054M	RES.-CARBON FLM 1/16W 10K-JB	RU29	AW00105	TRIMMER RESISTOR
RTG9	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB	RU30	0700039M	RES.-CARBON FLM 1/16W 820-JB(AP90)
RTH1	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB	RU30	0700042M	RES.-CARBON FLM 1/16W 1.2K-JB(AP91)
RTH2	0700052M	RES.-CARBON FLM 1/16W 6.8K-JB	RU31	0700049M	RES.-CARBON FLM 1/16W 4.7K-JB
RTH3	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB	RU32	0700052M	RES.-CARBON FLM 1/16W 6.8K-JB
RTH4	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB	RU33	AW00105	TRIMMER RESISTOR
RTH5	0700066M	RES.-CARBON FLM 1/16W 82K-JB	RU34	0700042M	RES.-CARBON FLM 1/16W 1.2K-JB
RTH6	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB	RU35	0700042M	RES.-CARBON FLM 1/16W 1.2K-JB
RTH7	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB	RU36	0700055M	RES.-CARBON FLM 1/16W 12K-JB(AP91)
RTH8	0700066M	RES.-CARBON FLM 1/16W 82K-JB	RU36	0700057M	RES.-CARBON FLM 1/16W 18K-JB(AP90)
RTH9	0700032M	RES.-CARBON FLM 1/16W 220-JB	RU37	AW00105	TRIMMER RESISTOR
RTJ1	0700032M	RES.-CARBON FLM 1/16W 220-JB	RU38	0700045M	RES.-CARBON FLM 1/16W 2.2K-JB
RTJ2	0700032M	RES.-CARBON FLM 1/16W 220-JB	RU39	0700045M	RES.-CARBON FLM 1/16W 2.2K-JB
RTJ3	0700056M	RES.-CARBON FLM 1/16W 15K-JB	RU40	0700047M	RES.-CARBON FLM 1/16W 3.3K-JB
RTJ4	0700032M	RES.-CARBON FLM 1/16W 220-JB	RU41	AW00105	TRIMMER RESISTOR
RTJ5	0700032M	RES.-CARBON FLM 1/16W 220-JB	RU42	0700047M	RES.-CARBON FLM 1/16W 3.3K-JB(AP91)
RTJ6	0700056M	RES.-CARBON FLM 1/16W 15K-JB	RU42	0700051M	RES.-CARBON FLM 1/16W 5.6K-JB(AP90)
RTJ7	0700032M	RES.-CARBON FLM 1/16W 220-JB	RU43	0700039M	RES.-CARBON FLM 1/16W 820-JB(AP90)
RTJ8	0700044M	RES.-CARBON FLM 1/16W 1.8K-JB	RU43	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB(AP91)
RTJ9	0700049M	RES.-CARBON FLM 1/16W 4.7K-JB	RU44	0700052M	RES.-CARBON FLM 1/16W 6.8K-JB
RTK1	0700048M	RES.-CARBON FLM 1/16W 3.9K-JB	RU45	AW00105	TRIMMER RESISTOR
RTK5	0700057M	RES.-CARBON FLM 1/16W 18K-JB(AP91)	RU46	0700053M	RES.-CARBON FLM 1/16W 8.2K-JB
RTK5	0700062M	RES.-CARBON FLM 1/16W 39K-JB(AP90)	RU47	AW00105	TRIMMER RESISTOR
RU01	AW00105	TRIMMER RESISTOR	RU48	0700047M	RES.-CARBON FLM 1/16W 3.3K-JB
RU02	0700039M	RES.-CARBON FLM 1/16W 820-JB(AP90)	RU49	0700047M	RES.-CARBON FLM 1/16W 3.3K-JB
RU02	0700042M	RES.-CARBON FLM 1/16W 1.2K-JB(AP91)	RU50	0700049M	RES.-CARBON FLM 1/16W 4.7K-JB
RU03	0700048M	RES.-CARBON FLM 1/16W 3.9K-JB(AP91)	RU51	AW00105	TRIMMER RESISTOR
RU03	0700052M	RES.-CARBON FLM 1/16W 6.8K-JB(AP90)	RU52	0700053M	RES.-CARBON FLM 1/16W 8.2K-JB
RU04	0700051M	RES.-CARBON FLM 1/16W 5.6K-JB	RU53	AW00105	TRIMMER RESISTOR
RU05	AW00105	TRIMMER RESISTOR	RU54	0700046M	RES.-CARBON FLM 1/16W 2.7K-JB
RU06	0700042M	RES.-CARBON FLM 1/16W 1.2K-JB(AP91)	RU55	0700052M	RES.-CARBON FLM 1/16W 6.8K-JB
RU06	0700047M	RES.-CARBON FLM 1/16W 3.3K-JB(AP90)	RU56	0700054M	RES.-CARBON FLM 1/16W 10K-JB
RU07	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB(AP90)	RU57	AW00105	TRIMMER RESISTOR
RU07	0700046M	RES.-CARBON FLM 1/16W 2.7K-JB(AP91)	RU58	0700045M	RES.-CARBON FLM 1/16W 2.2K-JB
RU08	0700052M	RES.-CARBON FLM 1/16W 6.8K-JB(AP90)	RU59	0700051M	RES.-CARBON FLM 1/16W 5.6K-JB(AP91)
RU08	0700054M	RES.-CARBON FLM 1/16W 10K-JB(AP91)	RU59	0700053M	RES.-CARBON FLM 1/16W 8.2K-JB(AP90)
RU09	AW00105	TRIMMER RESISTOR	RU60	0700047M	RES.-CARBON FLM 1/16W 3.3K-JB
RU10	0700048M	RES.-CARBON FLM 1/16W 3.9K-JB	RU61	AW00105	TRIMMER RESISTOR
RU11	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB	RU62	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB
RU12	0700045M	RES.-CARBON FLM 1/16W 2.2K-JB	RU63	0700052M	RES.-CARBON FLM 1/16W 6.8K-JB
RU13	AW00105	TRIMMER RESISTOR	RU64	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB
RU14	0700045M	RES.-CARBON FLM 1/16W 2.2K-JB	RU65	AW00105	TRIMMER RESISTOR
RU15	0700056M	RES.-CARBON FLM 1/16W 15K-JB	RU66	0700052M	RES.-CARBON FLM 1/16W 6.8K-JB
RU16	0700047M	RES.-CARBON FLM 1/16W 3.3K-JB	RU67	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB
RU17	AW00105	TRIMMER RESISTOR	RU68	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB
RU18	0700054M	RES.-CARBON FLM 1/16W 10K-JB	RU69	AW00105	TRIMMER RESISTOR
RU19	AW00105	TRIMMER RESISTOR	RU70	0700052M	RES.-CARBON FLM 1/16W 6.8K-JB
RU20	0700047M	RES.-CARBON FLM 1/16W 3.3K-JB	RU71	0700045M	RES.-CARBON FLM 1/16W 2.2K-JB
RU21	0700048M	RES.-CARBON FLM 1/16W 3.9K-JB	RU72	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB
RU22	0700049M	RES.-CARBON FLM 1/16W 4.7K-JB	RU73	AW00105	TRIMMER RESISTOR
RU23	AW00105	TRIMMER RESISTOR	RU74	0700061M	RES.-CARBON FLM 1/16W 33K-JB
RU24	0700058M	RES.-CARBON FLM 1/16W 22K-JB	RU75	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB

REPLACEMENT PARTS LIST

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SYMBOL NO.	PART NO.	PART DESCRIPTION	SYMBOL NO.	PART NO.	PART DESCRIPTION
RU76	AW00105	TRIMMER RESISTOR	RUG3	0700048M	RES.-CARBON FLM 1/16W 3.9K-JB
RU77	0700047M	RES.-CARBON FLM 1/16W 3.3K-JB	RUG4	0700045M	RES.-CARBON FLM 1/16W 2.2K-JB
RU78	0700043M	RES.-CARBON FLM 1/16W 1.5K-JB(AP91)	RUG5	AW00105	TRIMMER RESISTOR
RU78	0700044M	RES.-CARBON FLM 1/16W 1.8K-JB(AP90)	RUG6	0700049M	RES.-CARBON FLM 1/16W 4.7K-JB
RU79	0700046M	RES.-CARBON FLM 1/16W 2.7K-JB	RUG7	0700049M	RES.-CARBON FLM 1/16W 4.7K-JB
RU80	AW00105	TRIMMER RESISTOR	RUG8	0700047M	RES.-CARBON FLM 1/16W 3.3K-JB
RU81	0700066M	RES.-CARBON FLM 1/16W 82K-JB	RUG9	AW00105	TRIMMER RESISTOR
RU82	AW00105	TRIMMER RESISTOR	RUH1	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB
RU83	0700048M	RES.-CARBON FLM 1/16W 3.9K-JB	RUH2	0700053M	RES.-CARBON FLM 1/16W 8.2K-JB
RU84	0700051M	RES.-CARBON FLM 1/16W 5.6K-JB	RUH3	0700044M	RES.-CARBON FLM 1/16W 1.8K-JB
RU85	0700051M	RES.-CARBON FLM 1/16W 5.6K-JB	RUH4	AW00105	TRIMMER RESISTOR
RU86	AW00105	TRIMMER RESISTOR	RUH5	0700052M	RES.-CARBON FLM 1/16W 6.8K-JB
RU87	0700048M	RES.-CARBON FLM 1/16W 3.9K-JB	RUH6	0700045M	RES.-CARBON FLM 1/16W 2.2K-JB
RU88	0700051M	RES.-CARBON FLM 1/16W 5.6K-JB	RUH7	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB
RU89	0700044M	RES.-CARBON FLM 1/16W 1.8K-JB	RUH8	AW00105	TRIMMER RESISTOR
RU90	AW00105	TRIMMER RESISTOR	RUH9	0700051M	RES.-CARBON FLM 1/16W 5.6K-JB
RU91	0700042M	RES.-CARBON FLM 1/16W 1.2K-JB	RUJ1	0700047M	RES.-CARBON FLM 1/16W 3.3K-JB
RU92	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB	RUJ2	0700046M	RES.-CARBON FLM 1/16W 2.7K-JB
RU93	0700048M	RES.-CARBON FLM 1/16W 3.9K-JB	RUJ3	AW00105	TRIMMER RESISTOR
RU94	AW00105	TRIMMER RESISTOR	RUJ4	0700054M	RES.-CARBON FLM 1/16W 10K-JB
RU95	0700047M	RES.-CARBON FLM 1/16W 3.3K-JB	RUJ5	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB
RU96	0700047M	RES.-CARBON FLM 1/16W 3.3K-JB	RUJ6	0700054M	RES.-CARBON FLM 1/16W 10K-JB
RU97	0700048M	RES.-CARBON FLM 1/16W 3.9K-JB	RUJ7	AW00105	TRIMMER RESISTOR
RU98	AW00105	TRIMMER RESISTOR	RUJ8	0700066M	RES.-CARBON FLM 1/16W 82K-JB
RU99	0700053M	RES.-CARBON FLM 1/16W 8.2K-JB	RUJ9	0700051M	RES.-CARBON FLM 1/16W 5.6K-JB
RUA1	0700045M	RES.-CARBON FLM 1/16W 2.2K-JB	RUK1	0700053M	RES.-CARBON FLM 1/16W 8.2K-JB
RUA2	0700044M	RES.-CARBON FLM 1/16W 1.8K-JB	RUK2	AW00105	TRIMMER RESISTOR
RUA3	AW00105	TRIMMER RESISTOR	RUK3	0700042M	RES.-CARBON FLM 1/16W 1.2K-JB(AP90)
RUA4	0700056M	RES.-CARBON FLM 1/16W 15K-JB(AP90)	RUK3	0700048M	RES.-CARBON FLM 1/16W 3.9K-JB(AP91)
RUA4	0700058M	RES.-CARBON FLM 1/16W 22K-JB(AP91)	RUK4	0700046M	RES.-CARBON FLM 1/16W 2.7K-JB(AP91)
RUA5	0700027M	RES.-CARBON FLM 1/16W 100-JB	RUK4	0700051M	RES.-CARBON FLM 1/16W 5.6K-JB(AP90)
RUA6	AW00105	TRIMMER RESISTOR	RUK5	0700053M	RES.-CARBON FLM 1/16W 8.2K-JB
RUA7	0700047M	RES.-CARBON FLM 1/16W 3.3K-JB	RUK6	AW00105	TRIMMER RESISTOR
RUA8	0700051M	RES.-CARBON FLM 1/16W 5.6K-JB	RUK7	0700067M	RES.-CARBON FLM 1/16W 100K-JB
RUA9	0700042M	RES.-CARBON FLM 1/16W 1.2K-JB(AP91)	RUK8	0700049M	RES.-CARBON FLM 1/16W 4.7K-JB
RUA9	0700048M	RES.-CARBON FLM 1/16W 3.9K-JB(AP90)	RUK9	0700052M	RES.-CARBON FLM 1/16W 6.8K-JB
RUE1	AW00105	TRIMMER RESISTOR	RUL1	AW00105	TRIMMER RESISTOR
RUE2	0700066M	RES.-CARBON FLM 1/16W 82K-JB	RUL2	0700054M	RES.-CARBON FLM 1/16W 10K-JB
RUE3	AW00105	TRIMMER RESISTOR	RUL3	0700042M	RES.-CARBON FLM 1/16W 1.2K-JB(AP91)
RUE4	0700045M	RES.-CARBON FLM 1/16W 2.2K-JB	RUL3	0700045M	RES.-CARBON FLM 1/16W 2.2K-JB(AP90)
RUE5	0700052M	RES.-CARBON FLM 1/16W 6.8K-JB	RUL4	0700051M	RES.-CARBON FLM 1/16W 5.6K-JB
RUE6	0700054M	RES.-CARBON FLM 1/16W 10K-JB	RUL5	AW00105	TRIMMER RESISTOR
RUE7	AW00105	TRIMMER RESISTOR	RUL6	0700054M	RES.-CARBON FLM 1/16W 10K-JB
RUE8	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB	RUL7	0700042M	RES.-CARBON FLM 1/16W 1.2K-JB(AP91)
RUE9	0700049M	RES.-CARBON FLM 1/16W 4.7K-JB	RUL7	0700047M	RES.-CARBON FLM 1/16W 3.3K-JB(AP90)
RUF1	0700049M	RES.-CARBON FLM 1/16W 4.7K-JB	RUL8	0700048M	RES.-CARBON FLM 1/16W 3.9K-JB
RUF2	AW00105	TRIMMER RESISTOR	RUL9	AW00106	TRIMMER RESISTOR
RUF3	0700042M	RES.-CARBON FLM 1/16W 1.2K-JB	RUN1	0700047M	RES.-CARBON FLM 1/16W 3.3K-JB
RUF4	0700047M	RES.-CARBON FLM 1/16W 3.3K-JB	RUN2	0700045M	RES.-CARBON FLM 1/16W 2.2K-JB
RUF5	0700054M	RES.-CARBON FLM 1/16W 10K-JB	RUN3	AW00108	TRIMMER RESISTOR
RUF6	AW00105	TRIMMER RESISTOR	RUN4	0700066M	RES.-CARBON FLM 1/16W 82K-JB
RUF7	0700049M	RES.-CARBON FLM 1/16W 4.7K-JB	RUN5	AW00107	TRIMMER RESISTOR
RUF8	0700043M	RES.-CARBON FLM 1/16W 1.5K-JB	RUN6	0700067M	RES.-CARBON FLM 1/16W 100K-JB
RUF9	0700046M	RES.-CARBON FLM 1/16W 2.7K-JB	RUN7	0700066M	RES.-CARBON FLM 1/16W 82K-JB
RUG1	AW00105	TRIMMER RESISTOR	RUN8	0700066M	RES.-CARBON FLM 1/16W 82K-JB
RUG2	0700052M	RES.-CARBON FLM 1/16W 6.8K-JB	RUN9	AW00107	TRIMMER RESISTOR

REPLACEMENT PARTS LIST

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SYMBOL NO.	PART NO.	PART DESCRIPTION	SYMBOL NO.	PART NO.	PART DESCRIPTION
RUP1	0700067M	RES.-CARBON FLM 1/16W 100K-JB	RX57	0195925R	RES 2125 CHIP 1/16W 10KJ TAPE(AP91)
RUP2	0700066M	RES.-CARBON FLM 1/16W 82K-JB	RX58	0195952R	RMC73S-2A124JR(AP91)
RUP3	0700066M	RES.-CARBON FLM 1/16W 82K-JB	RX59	0195922R	RES 2125 CHIP 1/16W 8.2KJ TAPE(AP91)
RUP4	AW00107	TRIMMER RESISTOR	RX60	0195914R	RES 2125 CHIP 1/16W 3.9KJ TAPE(AP91)
RUP5	0700067M	RES.-CARBON FLM 1/16W 100K-JB	RX62	0195250R	RES 2125 CHIP 1/16W 000 TAPE(AP91)
RUP6	0700066M	RES.-CARBON FLM 1/16W 82K-JB	RX63	0195250R	RES 2125 CHIP 1/16W 000 TAPE(AP91)
RUP7	0700064M	RES.-CARBON FLM 1/16W 56K-JB	RY01	0195875R	RES 2125 CHIP 1/16W 100J TAPE
RUP8	AW00107	TRIMMER RESISTOR	RY05	0195875R	RES 2125 CHIP 1/16W 100J TAPE
RUP9	0700067M	RES.-CARBON FLM 1/16W 100K-JB	RY06	0195875R	RES 2125 CHIP 1/16W 100J TAPE
RUQ1	0700064M	RES.-CARBON FLM 1/16W 56K-JB	RY07	0195875R	RES 2125 CHIP 1/16W 100J TAPE
RUQ2	0700066M	RES.-CARBON FLM 1/16W 82K-JB	RY08	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE
RUQ3	AW00107	TRIMMER RESISTOR	RY09	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB
RUQ4	0700067M	RES.-CARBON FLM 1/16W 100K-JB	RY10	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB
RUQ5	0700066M	RES.-CARBON FLM 1/16W 82K-JB	RY11	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE
RUQ6	0700066M	RES.-CARBON FLM 1/16W 82K-JB	RY12	0195875R	RES 2125 CHIP 1/16W 100J TAPE
RUQ7	AW00107	TRIMMER RESISTOR	RY13	0195250R	RES 2125 CHIP 1/16W 000 TAPE
RUQ8	0700067M	RES.-CARBON FLM 1/16W 100K-JB	RY14	0195250R	RES 2125 CHIP 1/16W 000 TAPE
RUQ9	0700066M	RES.-CARBON FLM 1/16W 82K-JB	RY15	0195248R	RES 3216 CHIP 1/8 W 000 TAPE
RUR1	2340552	TH-112202-4	RY16	0195908R	RES.2125 CHIP 1/10W 2.2KJ TAPE
RX01	0195935R	RES 2125 CHIP 1/16W 27K-J TAPE(AP91)	RY17	0195912R	RES 2125 CHIP 1/16W 3.3KJ TAPE
RX02	0195950R	RES 2125 CHIP 1/16W 100KJ TAPE(AP91)	RY18	0195925R	RES 2125 CHIP 1/16W 10KJ TAPE
RX03	0195875R	RES 2125 CHIP 1/16W 100J TAPE(AP91)	RY19	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE
RX04	0195897R	RES 2125 CHIP 1/16W 820J TAPE(AP91)	RY20	0195897R	RES 2125 CHIP 1/16W 820J TAPE
RX05	0195893R	RES 2125 CHIP 1/16W 560J TAPE(AP91)	RY21	0195914R	RES 2125 CHIP 1/16W 3.9KJ TAPE
RX06	0195904R	RES 2125 CHIP 1/16W 1.5KJ TAPE(AP91)	RY22	0195887R	RES 2125 CHIP 1/16W 330J TAPE
RX07	0195875R	RES 2125 CHIP 1/16W 100J TAPE(AP91)	RY23	0195872R	RES 2125 CHIP 1/10W 82-J TAPE
RX08	0195897R	RES 2125 CHIP 1/16W 820J TAPE(AP91)	RY24	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE
RX22	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE(AP91)	RY25	0195925R	RES 2125 CHIP 1/16W 10KJ TAPE
RX26	0195967R	RES. MINI-CHIP RMC1/16 510K-J TAPE(AP91)	RY26	0195904R	RESISTOR 2125 CHIP 1/16W 1.5KJ TAPE
RX27	0195912R	RES 2125 CHIP 1/16W 3.3KJ TAPE(AP91)	RY27	0195915R	RESISTOR MINI-CHIP RMC1/16 4.3K-J TAPE
RX28	0195897R	RES 2125 CHIP 1/16W 820J TAPE(AP91)	RY28	0195920R	RES 2125 CHIP 1/16W 6.8KJ TAPE
RX29	0195875R	RES 2125 CHIP 1/16W 100J TAPE(AP91)	RY29	0195912R	RES 2125 CHIP 1/16W 3.3KJ TAPE
RX30	0195897R	RES 2125 CHIP 1/16W 820J TAPE(AP91)	RY30	0700027M	RES.-CARBON FLM 1/16W 100-JB
RX31	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE(AP91)	RY31	0195871R	RMC73S-2A750JR
RX32	0195897R	RES 2125 CHIP 1/16W 820J TAPE(AP91)	RY32	0195871R	RMC73S-2A750JR
RX33	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE(AP91)	RY33	0195941R	RESISTOR 2125 CHIP 1/16W 47KJ TAPE
RX34	0195931R	RES 2125 CHIP 1/16W 18KJ TAPE(AP91)	RY34	0195933R	RES.2125 CHIP 1/16W 22KJ TAPE
RX35	0195943R	RES.2125 CHIP 1/16W 56KJ TAPE(AP91)	RY35	0195871R	RMC73S-2A750JR
RX36	0195891R	RES 2125 CHIP 1/16W 470J TAPE(AP91)	RY39	0195887R	RES 2125 CHIP 1/16W 330J TAPE
RX37	0195889R	RES.2125 CHIP 1/10W 390J TAPE(AP91)	RY40	0195893R	RES 2125 CHIP 1/16W 560J TAPE
RX38	0195887R	RES 2125 CHIP 1/16W 330J TAPE(AP91)	RY41	0195870R	RESISTOR MINI-CHIP RMC1/10 68-J TAPE
RX39	0195925R	RES 2125 CHIP 1/16W 10KJ TAPE(AP91)	RY42	0195950R	RES 2125 CHIP 1/16W 100KJ TAPE
RX40	0195875R	RES 2125 CHIP 1/16W 100J TAPE(AP91)	RY43	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE
RX41	0195897R	RES 2125 CHIP 1/16W 820J TAPE(AP91)	RY44	0195875R	RES 2125 CHIP 1/16W 100J TAPE
RX42	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE(AP91)	RY46	0195875R	RES 2125 CHIP 1/16W 100J TAPE
RX43	0195893R	RES 2125 CHIP 1/16W 560J TAPE(AP91)	RY48	0195875R	RES 2125 CHIP 1/16W 100J TAPE
RX45	0195939R	RMC73S-2A393JR(AP91)	RY50	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE
RX46	0195925R	RES 2125 CHIP 1/16W 10KJ TAPE(AP91)	RY51	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE
RX47	0195891R	RES 2125 CHIP 1/16W 470J TAPE(AP91)	RY52	0195941R	RESISTOR 2125 CHIP 1/16W 47KJ TAPE
RX48	0195887R	RES 2125 CHIP 1/16W 330J TAPE(AP91)	RY53	0195933R	RES.2125 CHIP 1/16W 22KJ TAPE
RX49	0195875R	RES 2125 CHIP 1/16W 100J TAPE(AP91)	RY55	0195250R	RES 2125 CHIP 1/16W 000 TAPE
RX50	0195897R	RES 2125 CHIP 1/16W 820J TAPE(AP91)	RY56	0195875R	RES 2125 CHIP 1/16W 100J TAPE
RX51	0195912R	RES 2125 CHIP 1/16W 3.3KJ TAPE(AP91)	RY57	0195897R	RES 2125 CHIP 1/16W 820J TAPE
RX52	0195927R	RES 2125 CHIP 1/16W 12KJ TAPE(AP91)	RY61	0195248R	RES 3216 CHIP 1/8 W 000 TAPE
RX53	0195922R	RES 2125 CHIP 1/16W 8.2KJ TAPE(AP91)	RY62	0195250R	RES 2125 CHIP 1/16W 000 TAPE
RX55	0195875R	RES 2125 CHIP 1/16W 100J TAPE(AP91)	RY64	0195250R	RES 2125 CHIP 1/16W 000 TAPE

REPLACEMENT PARTS LIST

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SYMBOL NO.	PART NO.	PART DESCRIPTION	SYMBOL NO.	PART NO.	PART DESCRIPTION
RY65	0195250R	RES 2125 CHIP 1/16W 000 TAPE	RYH8	0195250R	RES 2125 CHIP 1/16W 000 TAPE
RY69	0700032M	RES.-CARBON FLM 1/16W 220-JB	RYH9	0195250R	RES 2125 CHIP 1/16W 000 TAPE
RY70	0195900R	RES 2125 CHIP 1/16W 1KJ TAPE	RYJ1	0195893R	RES 2125 CHIP 1/16W 560J TAPE
RY71	0700027M	RES.-CARBON FLM 1/16W 100-JB	RYJ2	0195893R	RES 2125 CHIP 1/16W 560J TAPE
RY72	0700027M	RES.-CARBON FLM 1/16W 100-JB	RYJ3	0195248R	RES 3216 CHIP 1/8 W 000 TAPE
RY73	0195875R	RES 2125 CHIP 1/16W 100J TAPE	RYJ4	0195250R	RES 2125 CHIP 1/16W 000 TAPE
RY74	0195897R	RES 2125 CHIP 1/16W 820J TAPE	RYJ5	0195248R	RES 3216 CHIP 1/8 W 000 TAPE
RY75	0195248R	RES 3216 CHIP 1/8 W 000 TAPE	RYJ6	0195250R	RES 2125 CHIP 1/16W 000 TAPE
RY77	0195960R	RESISTOR MINI-CHIP RMC1/16 270K-J TAPE	RYJ7	0195248R	RES 3216 CHIP 1/8 W 000 TAPE
RY78	0195960R	RESISTOR MINI-CHIP RMC1/16 270K-J TAPE	RYJ8	0195248R	RES 3216 CHIP 1/8 W 000 TAPE
RY79	0195875R	RES 2125 CHIP 1/16W 100J TAPE	RYJ9	0195248R	RES 3216 CHIP 1/8 W 000 TAPE
RY81	0195248R	RES 3216 CHIP 1/8 W 000 TAPE	RYK1	0195248R	RES 3216 CHIP 1/8 W 000 TAPE
RY83	0195250R	RES 2125 CHIP 1/16W 000 TAPE	RYK2	0195248R	RES 3216 CHIP 1/8 W 000 TAPE
RY84	0195897R	RES 2125 CHIP 1/16W 820J TAPE	RZ09	0147152	RES.-WIRE WOUND 3W 27-JA CEMENTED
RY85	0195871R	RMC73S-2A750JR			
RY86	0195871R	RMC73S-2A750JR			
RY87	0195871R	RMC73S-2A750JR			**MISCELLANEOUS**
RY88	0195875R	RES 2125 CHIP 1/16W 100J TAPE	E10B	2776543	MAG-VM(C-C)2/4P1.8UH
RY89	0195875R	RES 2125 CHIP 1/16W 100J TAPE	E10G	2776543	MAG-VM(C-C)2/4P1.8UH
RY90	0195943R	RES.2125 CHIP 1/16W 56KJ TAPE	E10R	2776543	MAG-VM(C-C)2/4P1.8UH
RY91	0195937R	RES.2125 CHIP 1/16W 33KJ TAPE	E11G	3811322	DY INSULATOR
RY96	0195875R	RES 2125 CHIP 1/16W 100J TAPE	⚠ E12B	BY00502	DY-V880-6.7SS(3.0)L YOKE ASS'Y
RY98	0195897R	RES 2125 CHIP 1/16W 820J TAPE	⚠ E12B	BY01121	DY-V80-7.0SS3.0L HCPM YOKE ASS'Y
RY99	0195943R	RES.2125 CHIP 1/16W 56KJ TAPE	⚠ E12B	BY00502	DY-V880-6.7SS(3.0)L(AP91) YOKE ASS'Y
RYA1	0195937R	RES.2125 CHIP 1/16W 33KJ TAPE	⚠ E12B	BY01121	DY-V80-7.0SS3.0L HCPM(AP90) YOKE ASS'Y
RYA2	0195875R	RES 2125 CHIP 1/16W 100J TAPE	⚠ E12G	BY00502	DY-V880-6.7SS(3.0)L YOKE ASS'Y
RYA3	0195891R	RES 2125 CHIP 1/16W 470J TAPE	⚠ E12G	BY01121	DY-V80-7.0SS3.0L HCPM YOKE ASS'Y
RYA4	0195891R	RES 2125 CHIP 1/16W 470J TAPE	⚠ E12G	BY00502	DY-V880-6.7SS(3.0)L(AP91) YOKE ASS'Y
RYA5	0195885R	RESISTOR 2125 CHIP 1/16W 270J TAPE	⚠ E12G	BY01121	DY-V80-7.0SS3.0L HCPM(AP90) YOKE ASS'Y
RYA6	0195875R	RES 2125 CHIP 1/16W 100J TAPE	⚠ E12R	BY00502	DY-V880-6.7SS(3.0)L YOKE ASS'Y
RYA7	0195925R	RES 2125 CHIP 1/16W 10KJ TAPE	⚠ E12R	BY01121	DY-V80-7.0SS3.0L HCPM YOKE ASS'Y
RYA8	0195897R	RES 2125 CHIP 1/16W 820J TAPE	⚠ E12R	BY00502	DY-V880-6.7SS(3.0)L(AP91) YOKE ASS'Y
RYA9	0195943R	RES.2125 CHIP 1/16W 56KJ TAPE	⚠ E12R	BY01121	DY-V80-7.0SS3.0L HCPM(AP90) YOKE ASS'Y
RYC1	0195937R	RES.2125 CHIP 1/16W 33KJ TAPE	E201	FQ00021	BATTERY(R6P-AA)
RYC2	0195875R	RES 2125 CHIP 1/16W 100J TAPE	E2B	2958351	CONN. W/WIRE MINI 2J
RYC3	0195891R	RES 2125 CHIP 1/16W 470J TAPE	E2G	2958351	CONN. W/WIRE MINI 2J
RYC4	0195891R	RES 2125 CHIP 1/16W 470J TAPE	E2R	2958351	CONN. W/WIRE MINI 2J
RYC5	0195889R	RES.2125 CHIP 1/10W 390J TAPE	E301	HL00726	RML CLU-435UI REMOTE CONTROL
RYC6	0195875R	RES 2125 CHIP 1/16W 100J TAPE	E3B	EZ00911	COZ-ANODE COVER SP45-S3
RYC7	0195925R	RES 2125 CHIP 1/16W 10KJ TAPE	E3G	EZ00911	COZ-ANODE COVER SP45-S3
RYC8	0195897R	RES 2125 CHIP 1/16W 820J TAPE	E3R	EZ00911	COZ-ANODE COVER SP45-S3
RYC9	0195875R	RES 2125 CHIP 1/16W 100J TAPE	E701	AZ00107M	PROTECTOR CRXT491004
RYG1	0195250R	RES 2125 CHIP 1/16W 000 TAPE	E801	EY00301	CPT SOCKET CD-042(STYPE)(AP91)
RYG4	0195248R	RES 3216 CHIP 1/8 W 000 TAPE	E801	EY00941	CRT-SOCKET(AP90)
RYG5	0195248R	RES 3216 CHIP 1/8 W 000 TAPE	E831	EY00301	CPT SOCKET CD-042(STYPE)(AP91)
RYG6	0195250R	RES 2125 CHIP 1/16W 000 TAPE	E831	EY00941	CRT-SOCKET(AP90)
RYG7	0195250R	RES 2125 CHIP 1/16W 000 TAPE	E861	EY00301	CPT SOCKET CD-042(STYPE)(AP91)
RYG8	0195250R	RES 2125 CHIP 1/16W 000 TAPE	E861	EY00941	CRT-SOCKET(AP90)
RYG9	0195248R	RES 3216 CHIP 1/8 W 000 TAPE	⚠ E901	EV00901	COD-AP9X-B-160
RYH1	0195248R	RES 3216 CHIP 1/8 W 000 TAPE	E92F	3446473	HEATSINK H30 P10
RYH2	0195248R	RES 3216 CHIP 1/8 W 000 TAPE	E92N	4520883	3*12 SCREW WITH WASHER
RYH3	0195250R	RES 2125 CHIP 1/16W 000 TAPE	E93F	3446473	HEATSINK H30 P10
RYH4	0195250R	RES 2125 CHIP 1/16W 000 TAPE	E93N	4520883	3*12 SCREW WITH WASHER
RYH5	0195250R	RES 2125 CHIP 1/16W 000 TAPE	E98F	MC00104	HEAT SINK P10 H45 19 A6063S-75
RYH6	0195248R	RES 3216 CHIP 1/8 W 000 TAPE	E98N	4520883	3*12 SCREW WITH WASHER
RYH7	0195248R	RES 3216 CHIP 1/8 W 000 TAPE	⚠ E991	AZ00109M	PROTECTOR CRXT491007

REPLACEMENT PARTS LIST

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SYMBOL NO.	PART NO.	PART DESCRIPTION	SYMBOL NO.	PART NO.	PART DESCRIPTION
⚠ E994	AZ00104M	PROTECTOR(CRXT491002)	N151G	4526322	M8*10 SEAL SCREW SUS
⚠ E995	AZ00109M	PROTECTOR CRXT491007	N151R	4526322	M8*10 SEAL SCREW SUS
⚠ E996	AZ00109M	PROTECTOR CRXT491007	N153B	H810223	PRT SCREW (SHORT)
⚠ E997	AZ00109M	PROTECTOR CRXT491007	N153G	H810223	PRT SCREW (SHORT)
⚠ E999	AZ00109M	PROTECTOR CRXT491007	N153R	H810223	PRT SCREW (SHORT)(AP91)
E99F	MC00104	HEAT SINK P10 H45 19 A6063S-75	N154B	H830091	CRT SPRING
E99N	4520883	3*12 SCREW WITH WASHER	N154G	H830091	CRT SPRING
E9A	MA00842	POWER HEAT SINK AP73B A1100P-H14	N154R	H810223	PRT SCREW (SHORT)(AP90)
E9DN	4520883	3*12 SCREW WITH WASHER	N154R	H830091	CRT SPRING
E9DW	4269926	WASHER PL-1252	N157B	4524913	HEX FLANGE HEAD B-TIGHT TN E RED SWCH16A
E9IN	4520883	3*12 SCREW WITH WASHER	N157G	4524913	HEX FLANGE HEAD B-TIGHT TN E RED SWCH16A
E9QF	MC00104	HEAT SINK P10 H45 19 A6063S-75	N157R	4524913	HEX FLANGE HEAD B-TIGHT TN E RED SWCH16A
E9QN	4520883	3*12 SCREW WITH WASHER	N160	3733243	NP3 LEAD CRAMP (V0)
EAN	2974056S	3J CONNE SEH UL1007 L=160(AP91)	N165B	4621681	SEALING CUSHION
EBG1	EF08271	CO-06B-B2R5-301	N165R	4621681	SEALING CUSHION
EBG2	2966821	4J CONNE. L=300	N2	MD03061	SHIELD PLATE AP7X A TC-30
ED94	EY00791	PJX-LEAD-PLUGPIN	N200B	KQ00741	DELTA 78 A/B ASS RGB
ED95	EY00791	PJX-LEAD-PLUGPIN	N200G	KQ00741	DELTA 78 A/B ASS RGB
ED99	EY00791	PJX-LEAD-PLUGPIN	N200R	KQ00741	DELTA 78 A/B ASS RGB
EF91	FP00031R	FUSE HOLDER TP00351-51	N201	QR29901	60EX49B-511 INST BOOK
EGR1	EF08381	CO-05B-B2R5-301	N201	QR29911	60EX49B-501 INST BOOK
EGR2	2966821	4J CONNE. L=300	N202	3611877	POLYETHLENE COVER
ET01	AZ00101M	PROTECTOR(CRXT491.500)	N203B	3393751	DELTA 77 C-ELEMENT
ET02	AZ00101M	PROTECTOR(CRXT491.500)	N203G	3393754	DELTA 77 C-ELEMENT G
JY01	ES00181	JACK 2S-14US	N203R	3393751	DELTA 77 C-ELEMENT
JZ01	ER00121	2L4P LEVER TERMINAL	N301B	9483051	COOLANT (GE-55)
N1	MD03052	SHIELD CASE AP7X B TC-30	N301G	9483051	COOLANT (GE-55)
N100	W083428	PURCHASE SPEC. ALUMINUM DIE CA	N301R	9483051	COOLANT (GE-55)
N101B	ND00211	D78 BRACKET RB55	N401	3442022	SOUND HEAT SINK 2CH
N101G	ND00201	AP91 BRACKET G	N401A	4520883	3*12 SCREW WITH WASHER
N101R	ND00211	D78 BRACKET RB55	N406B	3335321	GROUNDING SPRING
N111B	3810112	HP BELLOWS STAY	N406G	3335321	GROUNDING SPRING
N111G	3810112	HP BELLOWS STAY	N406R	3335321	GROUNDING SPRING
N111R	3810112	HP BELLOWS STAY	N409B	4159411	SCREW 3*8 KNURLED TAPPING SWRM
N121B	4738241	ORING PRTX	N409G	4159411	SCREW 3*8 KNURLED TAPPING SWRM
N121G	4738241	ORING PRTX	N409R	4159411	SCREW 3*8 KNURLED TAPPING SWRM
N121R	4738241	ORING PRTX	N426B	3875441	LEAD CLAMPER
N123B	4618771	LENS SEAL P FLUORO RUBBER	N426G	3875441	LEAD CLAMPER
N123G	4618771	LENS SEAL P FLUORO RUBBER	N426R	3875441	LEAD CLAMPER
N123R	4618771	LENS SEAL P FLUORO RUBBER	N601	3442081	HEAT SINK (V) A2
N125B	4621121	BELLOWS R EPDM	N602	4520881	M3*8 SCREW WITH WASHER
N125G	4621121	BELLOWS R EPDM	N701	MA00851	HEAT SINK AP73 (H)A1100P-H14
N125R	4621121	BELLOWS R EPDM	N702	4520883	3*12 SCREW WITH WASHER
N127B	4618311	O RING (P9) FLUORO RUBBER	N703	NT00981	FBT HOLDER AP74 PS(HI=100%)
N127G	4618311	O RING (P9) FLUORO RUBBER	N704	4159425	3X16 TAPPING WITH WASHER SWRM
N127R	4618311	O RING (P9) FLUORO RUBBER	N711	NA03111	CHAS PWB BRACKET AP5 CL1SECC20/20E
N129B	4618321	PAD RUBBER CHLOROPRENE RU	N715	NA20921	CHASSIS PWB BKT AP7X L1 SECC20/20E
N129G	4618321	PAD RUBBER CHLOROPRENE RU	N721	4491082	CHASSIS PWB BKT FB2 SECC20/20E
N129R	4618321	PAD RUBBER CHLOROPRENE RU	N725	NA03131	CHAS PWB BRACKET AP5 BB1 SECC20/20E
N131B	4491961	LENS PLATE(AP32)	N730	4159427	3X10 SCREW WITH WASHER STEEL
N131G	4491961	LENS PLATE(AP32)	N740	4531761	SCREEN 3X16 TAPPING W/S-WASHER STEEL
N131R	4491961	LENS PLATE(AP32)	N745	2781697	YC20A INSULATION WASHER
N134B	4491971	PRT METAL H(AP32)	N801	3763751	SK BINDER
N134G	4491971	PRT METAL H(AP32)	N802	3446473	HEATSINK H30 P10
N134R	4491971	PRT METAL H(AP32)	N803	4520883	3*12 SCREW WITH WASHER
N151B	4526322	M8*10 SEAL SCREW SUS	N901	3782714	PCB SUPPORT 10S NYLON

REPLACEMENT PARTS LIST

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SYMBOL NO.	PART NO.	PART DESCRIPTION	SYMBOL NO.	PART NO.	PART DESCRIPTION
NE01	3446473	HEATSINK H30 P10	PSI1	ED00575	CP-TAC-L18X-A1
NE02	4520883	3*12 SCREW WITH WASHER	PSI1	ED00515	CP-TAC-L18P-A1
NK05	MC00192	CONV.HEAT SINK AP73B A6063S-T5	PSI2	ED00575	CP-TAC-L18X-A1
NK06	4520885	3*16 SCREW WITH WASHER	PSI2	ED00515	CP-TAC-L18P-A1
NK07	4531761	SCREEN 3X16 TAPPING W/S-WASHER STEEL	PST	2675286	PH CONNE. 7P
NK08	NA20781	CONV. IC SUP BRACKET AP74 SECC20/20E	PSU1	ED00576	CP-TAC-L20X-A1
NM71	3816161	G9 EE HOLDER (S)	PSU1	ED00516	CP-TAC-L20P-A1
NM72	NJ01171	LED HOLDER A5WS	PTS	2663821	2P SUB MINI PLUG PIN
NT01	3875341	LEAD CLAMPER	PVM1	ED00566	CP-TAC-L10X-A1
NT02	3875341	LEAD CLAMPER	PVM1	ED00506	CP-TAC-L10P-A1
P001	2663821	2P SUB MINI PLUG PIN	PVM2	ED00566	CP-TAC-L10X-A1
P801	2961141	2P PLUG PIN WITH BASE	PVM2	ED00506	CP-TAC-L10P-A1
P802	2661756	1P PLUG PIN WITH BASE	PVMC	2902262	PLUG PIN SUB MINI 3P
P831	2961141	2P PLUG PIN WITH BASE	PY1	2675285	PIN POST (PH 6P)
P832	2661756	1P PLUG PIN WITH BASE	PY1	2959055	CONNECTOR-6P(PH)
P861	2961141	2P PLUG PIN WITH BASE	PY2	2902263	PLUG PIN SUB MINI 4P
P862	2661756	1P PLUG PIN WITH BASE	PY2	2902263	PLUG PIN SUB MINI 4P
⚠ P901	ED01851	PLUG 5289-2A	⚠ V1B	DE01083	CRT 180DLB22 B(AP90)
PB	2661756	1P PLUG PIN WITH BASE	⚠ V1G	DE01082	CRT 180DLB22 G(AP90)
PB	2661756	1P PLUG PIN WITH BASE	⚠ V1R	DE01081	CRT 180DLB22 R(AP90)
PCB	2903544	4P PLUG PIN WITH BASE	W811	2692464	CO-01C-N0R0-821FOCUS
PCB	ED00572	CP-TAC-L15X-A1	W812	EK00062	WIRE (PROCESSED) FOR SCREEN
PCB	ED00512	CP-TAC-L15P-A1	W841	2692463	CONNECTOR FOR FOCUS
PCC	ED00576	CP-TAC-L20X-A1	W842	EK00061	WIRE (PROCESSED)
PCC	ED00516	CP-TAC-L20P-A1	W871	2692463	CONNECTOR FOR FOCUS
PCD	ED00576	CP-TAC-L20X-A1	W872	EK00061	WIRE (PROCESSED)
PCD	ED00516	CP-TAC-L20P-A1	W901	2964863	2J-CONNECTOR
PCG	2903544	4P PLUG PIN WITH BASE	WJ01	9374575	UL CSA1007-24HP CODE GREEN
PCR	2903544	4P PLUG PIN WITH BASE	WJ01	9374575	UL CSA1007-24HP CODE GREEN
PCX	ED00572	CP-TAC-L15X-A1	WJ02	9374575	UL CSA1007-24HP CODE GREEN
PCX	ED00512	CP-TAC-L15P-A1	WJ04	9374575	UL CSA1007-24HP CODE GREEN
PFJ	2902268	PLUG PIN SUB MINI 9P	WJ05	9374575	UL CSA1007-24HP CODE GREEN
PFJ	2902248	PLUG PIN SUB MINI9P	X001	2168831	CRYSTAL CSA12.0MTZ
PFT	ED01596U	PLUG CP-04BP5R0VU-TBL#2,3N	X100	BP00771	OSXR032X121TA252E00
PL	2903545	5P PLUG PIN WITH BASE	X501	2791501	CRYSTAL HC-49/U
PMB	ED01597U	PLUG CP-06BP5R0VU-TBL#3,5N	X502	2168771	X'TAL CSB503F30
PMG	ED01597U	PLUG CP-06BP5R0VU-TBL#3,5N	Z1	9414017	SILICONE COMPOUND(G-746)
PMR	ED01597U	PLUG CP-06BP5R0VU-TBL#3,5N	Z1	9449598	NITTOH TAPE NO.188
PP	2903543	3P PLUG PIN WITH BASE	Z1B	9563404	SILICONE RUBBER (KE402W)
PP	2903543	3P PLUG PIN WITH BASE	Z1G	9563404	SILICONE RUBBER (KE402W)
PP31	2661751	2P PLUG PIN WITH BASE	Z1R	9563404	SILICONE RUBBER (KE402W)
PR	2903544	4P PLUG PIN WITH BASE	Z2B	9563404	SILICONE RUBBER (KE402W)
PRC	2902269	PLUG PIN SUB MINI10P	Z2G	9563404	SILICONE RUBBER (KE402W)
PRC	2902269	PLUG PIN SUB MINI10P	Z2R	9563404	SILICONE RUBBER (KE402W)
PRR	2902271	PLUG PIN SUB MINI11P	Z3B	9449506	SCOTCH TAPE NO.29 19MM
PRR	2902271	PLUG PIN SUB MINI11P	Z3G	9449506	SCOTCH TAPE NO.29 19MM
PSD1	ED01491U	CONNECTOR 07BS1R2VUTWGX-A1	Z3R	9449506	SCOTCH TAPE NO.29 19MM
PSD1	ED01471U	PLUG 07BP1R2HUTWGP-A1	Z5B	9553958	ADHESIVE TAPE (PERMACEL P212 19W)
PSD2	ED01492U	CONNECTOR 11BS1R2VUTWGX-A1	Z5G	9553958	ADHESIVE TAPE (PERMACEL P212 19W)
PSD2	ED01472U	PLUG 11BP1R2HUTWGP-A1	Z5R	9553958	ADHESIVE TAPE (PERMACEL P212 19W)
PSD3	ED01492U	CONNECTOR 11BS1R2VUTWGX-A1	Z701	9449603	NITTOH TAPE #747
PSD3	ED01472U	PLUG 11BP1R2HUTWGP-A1	Z701	9485158	HOT MELT (AX-1503C)
PSD4	ED01493U	CONNECTOR 13BS1R2VUTWGX-A1	Z710	9485158	HOT MELT (AX-1503C)
PSD4	ED01473U	PLUG 13BP1R2HUTWGP-A1	Z905	9485158	HOT MELT (AX-1503C)
PSD5	ED01491U	CONNECTOR 07BS1R2VUTWGX-A1	ZH91	9451140	UL CSA TUBE AWG NO12 CLEAR
PSD5	ED01471U	PLUG 07BP1R2HUTWGP-A1	ZNS1	9414017	SILICONE COMPOUND(G-746)

REPLACEMENT PARTS LIST

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PART NO.	PART NO.	PART DESCRIPTION
ZNS2	9485158	HOT MELT (AX-1503C)
ZT90A	H390062	SPECIAL CUSHION CHLOR
ZT90B	H312132	PWB INSOLATOR
Z201	9542102	STAPLE(MAX N0.10)
		INTEGRATED CIRCUITS
I001	CP06613U	IC MN1876478HE(C) Main Micro
I004	CP05272U	E2PROM M24C16-BN6
I006	CK07131R	ANALOG MONO. IC (MC14053BFEL)
I007	2000541	IC M51951BSL
I008	2020342	IC MM1115XS
I102	CP05245U	Z9035612PSCR4393(C) OSD MICRO
I103	2000541	IC M51951BSL
I105	2015495R	IC HD74HC32FPEL
I106	CP05571	IC BA17805
I201	CK07631R	DIGITAL MONOLITHIC IC (TC90A45F)(AP90)
I401	2004751	IC TA8200AH Audio Output
I501	CP03552U	IC TA1222BN Rain Forestic
I503	CK08951R	MM1389XFBE
I601	2003541	IC LA7838 Vert Output
I602	CP06351U	ANALOG MONOLITHIC IC BA10393
⚠ I901	CZ00451	HYBRID IC (STR-M6811A) B+ Regulator
⚠ I902	2000465	IC PS2501-1 (KC/LC) Opto Isolator IC
⚠ I903	2000465	IC PS2501-1 (KC/LC) Opto Isolator IC
⚠ I904	2000465	IC PS2501-1 (KC/LC) Opto Isolator IC
⚠ I905	2381349	HYBRID IC (SE120N:+B CONT.) 120V Reg IC
I908	CP05573	IC BA17812 12V Reg
I909	1360891	IC-NJM7912FA M12V Reg
⚠ I910	CP03912F	IC (SI-8402L) 12V Reg
I912	CP03923F	IC (SI-8090S) 9V Reg
I913	CP03922F	IC (SI-8050S) 5V Reg
IK04	CZ00431	IC (STK392-110) Conv. Output
IK05	CZ00431	IC (STK392-110) Conv. Output
IK07	CP02781	M62399P
IS05	2020001	IC TDA9860 Audio Cotroller IC
IS12	CP02601	AN5285K
IT01	2383191	IC LA7990
IT02	2914051	IC NJM4560D
IT03	2914051	IC NJM4560D
IT04	2914051	IC NJM4560D
IT05	2914051	IC NJM4560D
IT06	CP01631R	ICL-PST9142 Comb Filter
IX01	CP04011U	IC (TC90A13N)(AP91)
IY01	2020452	IC (CXA1545AS) A/V Selector
IY02	2003423	IC UPC7893AHF ICL
		SPARK GAPS
⚠ G701	CJ00071R	SPARK GAP AG15PC-152FS-K2M
⚠ G801	CJ00071R	SPARK GAP AG15PC-152FS-K2M
⚠ G802	CJ00071R	SPARK GAP AG15PC-152FS-K2M
⚠ G831	CJ00071R	SPARK GAP AG15PC-152FS-K2M
⚠ G832	CJ00071R	AG15PC-152FS-K2M
⚠ G861	CJ00071R	AG15PC-152FS-K2M
⚠ G862	CJ00071R	AG15PC-152FS-K2M
⚠ GF01	CJ00072R	252FB-K2M

SYMBOL NO.	PART NO.	PART DESCRIPTION
		SWITCHES
SM01	FE00061	1P TACT SWITCH
SM02	FE00061	1P TACT SWITCH
SM03	FE00061	1P TACT SWITCH
SM04	FE00061	1P TACT SWITCH
SM05	FE00061	1P TACT SWITCH
SM06	FE00061	1P TACT SWITCH
SM07	FE00061	1P TACT SWITCH
SZ01	FD00041	SLIDE SWITCH
		FUSE
⚠ F901	2722358	FUSE AC05A
		TRANSFORMERS
⚠ T701	2260291U	HORIZONTAL DRIVE TRANS.
⚠ T702	BW00632	HFL1735YP-RC Flyback Transformer
⚠ T703	2272762	TRANS.-SATURBLE
⚠ T901	BT00801	POWER TRANSFORMER EE49F17U-AP73F
		COMPOUND COMPONENTS
⚠ H901	2793312	CP-EXN-471P365L CAPRISTOR
HM01	CZ00523	REMOTE CONTROL RCVR. SBX1981-52P
U002	HP00094	PINP UNIT KC-010S
U101	HC00311	TUNER UNIT V6-A30FT MAIN TUNER
U102	2429691	TUNER V8-A68FT(AP91) PIP TUNER
⚠ U401	2412921	SPEAKER 160DG
⚠ U402	2412921	SPEAKER 160DG
⚠ UFPK	AZ00161	CRX FOCUS PACK HDK

REPLACEMENT PARTS LIST

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PART NO.	PART NO.	PART DESCRIPTION	SYMBOL NO.	PART NO.	PART DESCRIPTION
		EXPLODED VIEW PARTS LIST			
①	PH05723	CONTROL PANEL ASS'Y			
②	NA11701	LENS/CRT METAL			
③	KS00167	MIRROR (60")			
③	KS00169	MIRROR (50")			
④	33010291	BARRIER BOARD (50")			
④	33010284	BARRIER BOARD (60")			
⑤	QD04112	REAR COVER (60")			
⑤	QD03841	REAR COVER (50")			
⑥	55020069	FRONT DOOR ASS'Y			
⑦	3320061	BACK CENTER BAR (50")			
⑦	3320051	BACK CENTER BAR (60")			
⑧	H512249	LOWER REAR BOARD (50CX29B)			
⑧	H512243	LOWER REAR BOARD (60CX29B)			
⑨	32110069	SPEAKER GRILL (50CX29B)			
⑨	32110066	SPEAKER GRILL (60EX39B)			
⑨	32110068	SPEAKER GRILL (60CX29B)			
⑩	NA11681	MIRROR METAL A			
⑪	NAI11691	MIRROR METAL B			
⑫	KR01223	SCREEN ASS'Y (60")			
⑫	KR01221	SCREEN ASS'Y (50")			
⑬	H311404	DECO FRAME PAINTED			
⑭	H311814	TOP FRAME PAINTED (50")			
⑭	H311816	TOP FRAME PAINTED (60")			
⑮	DE01081	CRT 180DLB22(R) (50CX29B)			
⑮	DE01771	CRT P16LNM07 RJA (R) (60EX39B)			
⑯	DE01082	CRT 180DLB22(G) (50CX29B)			
⑯	DE01772	CRT P16LNM07 HKA (G) (60EX39B)			
⑰	DE01083	CRT 180DLB22(B) (50CX29B)			
⑰	DE01773	CRT P16LNM07 BMB (B) (60EX39B)			
⑱	KQ00741	DELTA78 A/B ASS'Y RGB			
⑲	KQ00741	DELTA78 A/B ASS'Y RGB			
⑳	KQ00741	DELTA78 A/B ASS'Y RGB			

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